40496

National Library of Canada / Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE / THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR/NOM DE L'AUTEUR MARY E. SHARON

TITLE OF THESIS/TITRE DE LA THÈSE EXPECTATION CHANGES AS A FUNCTION OF THE WITHDRAWAL OF SOCIAL COMPARISON AND EVALUATION FEEDBACK

UNIVERSITY/UNIVERSITÉ ALBERTA

DEGREE FOR WHICH THESIS WAS PRESENTED/ GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE MASTER OF ARTS

YEAR THIS DEGREE CONFERRED/ANNÉE D'OBTENTION DE CE GRADE 1979

NAME OF SUPERVISOR/NOM DU DIRECTEUR DE THÈSE W. DAVID PIERCE

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED/DATÉ April 17, 1979 SIGNED/SIGNÉ Mary E. Sharon

PERMANENT ADDRESS/RÉSIDENCE FIXE 5046 Whitemud Road
Edmonton.
Alberta T6H 5B1

NL-91 (3-78)

National Library of Canada

Cataloguing Branch
Canadian Theses Division

Ottawa, Canada
K1A 0N4

Bibliothèque nationale du Canada

Direction du catalogage
Division des thèses canadiennes

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

THE UNIVERSITY OF ALBERTA

EXPECTATION CHANGES AS A FUNCTION OF THE WITHDRAWAL OF SOCIAL COMPARISON AND EVALUATION FEEDBACK

by

(C)

Mary E. Sharon

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

DEPARTMENT OF SOCIOLOGY

Edmonton, Alberta

Spring 1979

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled **Expectation Changes as a Function of the Withdrawal of Social Comparison and Evaluation Feedback** submitted by **Mary E. Sharon** in partial fulfilment of the requirements for the degree of **Master of Arts.**

W. David Pierce

W. David Pierce, Ph.D.
Chairman

W Andrew Harrell

Andrew Harrell, Ph.D.

Sharon McDowin Abu-Laban

Sharon Abu-Laban, Ph.D.

Ann-Marie Decore

Ann-Marie Decore, Ph.D. (Ed. Foundations)

Date: November 30, 1978

DEDICATION

To my Family who have encouraged my academic involvement and particularly to my husband Bill who has walked patiently with me through the hours of thinking and writing.

ABSTRACT

The research reported here is concerned with the maintenance and change of expectations. Expectation theory has, for the most part, neglected questions of the importance of social comparison for the maintenance of expectations, particularly in the absence of evaluation feedback.

An experimental study based on theoretical framework developed from expectation states theory, social comparison and balance theory, was conducted with students from a high school. The research allowed us to examine the theoretical assumptions proposed, to determine the applicability of the theoretical framework in the experimental setting, and to suggest ways of adapting it for the study of natural settings.

The results demonstrate, at least for the setting studied, that individuals with high expectations decrease their level of expectancy and individuals with low expectations increase their level of expectancy, when both social comparison and evaluation information are withdrawn. The most important finding was that the high expectation individuals reversed their level of expectancy over time when both sources of feedback were simultaneously withdrawn. The results strongly indicate the need for almost constant positive feedback by the person who sees himself as a high achiever.

The results are extensively discussed and suggestions are made for future research, specifically in the area of natural settings. Methodological as well as theoretical changes and extensions are also suggested. It is further suggested that future research with respect to the changes in behaviour of the Aging, of widows, and of retired persons might do well to consider factors such as changes in expectations, which may contribute to changes in the confidence of these individuals.

ACKNOWLEDGMENTS

I am indebted to all the members of my committee and I want to thank each one for their unique contribution. Particular mention is due Dr. David Pierce and Dr. Sharon Abu-Laban.

From the initial stages to the final defense Dr. Sharon Abu-Laban has provided me with encouragement and confidence. I want to specially thank her for her support.

The supervision, assistance, criticism, and most importantly the enthusiasm of Dr. David Pierce provided an atmosphere in which I was eventually able to grow. I want to thank Dr. Pierce for facilitating this growth. I am fortunate to have him as mentor.

I also want to thank Dr. Martha Foschi for the assistance she gave me in this area of research and for providing the initial spark during my years as an undergraduate at the University of British Columbia.

To Lothar Goetz I also owe a special thank you for providing the task for my study. Also for his friendship and support during the early years of work on this project when my ideas were developing.

In all stages of my research I have had the benefit of the counsel of David Sunahara, my office partner, who generously offered of his time to help me in a multitude of ways. I particularly appreciate David's contribution when I was in need of someone with whom to think things through.

Finally I want to thank my friend Louise Morose, a fellow graduate student, with whom I have had countless discussions. In all stages of my graduate studies I have had the good fortune to have Ms. Morose as a confidant. I am most grateful to her for friendship and support and most recently for her help in editing this thesis.

TABLE OF CONTENTS

CHAPTER		PAGE
I	THE PROBLEM	1
	Statement of the Problem	1
	Background of the Problem	3
	Theoretical Model	7
	Research Hypotheses	8
	Significance of the Research	9
II	THE METHOD	12
	Subjects	12
	Experimental Design	12
	1. Pre-experimental Stage	13
	2. Experimental Stage	13
	Setting and Apparatus	15
	Dependent Variable	15
	Procedure	15
III	THE RESULTS	20
	Removing Suspicious Subjects	20
	Manipulation Check	20
	Section 1 of Analyses	22
	Analysis of Self-Other Difference Scores	22
	Main Effects of Social Comparison	24
	Main Effects of Evaluation	24

CHAPTER PAGE

III (Continued)

Interaction Effects of Evaluation and Social Comparison 27

Analysis of Self–Other Absolute Difference Scores 31

Effects of Social Comparison on Absolute Difference Scores 31

Effects of Evaluation on Absolute Difference Scores 31

Effects of Evaluation and Comparison on Absolute Difference Scores 31

Interaction of Expectancy with Social Comparison and with Evaluation 33

Effects of Expectancy on Absolute Differences 33

Process Analysis 33

Effects of Time on Expectancy 34

Effects of Time and Evaluation on Expectancy 34

Effects of Time and Social Comparison on Expectancy 34

Effects of Social Comparison, Evaluation and Time on Expectancy 37

Section 2 of Analyses 41

Effects of Social Comparison on Self Scores 41

Effects of Evaluation on Self Scores 42

Effects of Social Comparison and Evaluation on Self Scores 42

Effects of Time on Self Scores 42

Effects of Self Scores of Time with Evaluation and with Comparison 45

Effects of Social Comparison, Evaluation and Time on Self Scores 45

Effects of Social Comparison on Other Scores 47

Effects of Evaluation on Other Scores 47

Effects of Time on Other Scores 47

Effects of Two-way Interactions on Other Scores 49

Effects of Time, Social Comparison and Evaluation on Other Scores 49

CHAPTER PAGE

IV DISCUSSION 51

Maintenance and Change in Expectancy 51

Practical Importance and Application of Findings 55

Comparison of High and Low Expectancy Effects 59

Process of Expectancy Change 60

Changes in Beliefs About Self and Other 61

Summary 63

V SUGGESTIONS FOR FUTURE RESEARCH 65

1. Methodological Extensions 65

2. Attribution Theory Investigation 65

3. Theoretical Extensions 67

* * * * * * * * *

SELECTED BIBLIOGRAPHY 68

APPENDIX A: DISCUSSION OF EXPERIMENTAL TASK 71

APPENDIX B: INTRODUCTION TO THE STUDY 73

APPENDIX C: POST INTRODUCTION TO STUDY QUESTIONNAIRE 74

APPENDIX D: INSTRUCTIONS TO SUBJECTS FOR ALL CONDITIONS 75

APPENDIX E: POST TASK DESCRIPTION AND PRACTICE TRIALS QUESTIONNAIRE 77

APPRNDIX F: POST TRIAL TWENTY QUESTIONS 78

APPENDIX G: INSTRUCTIONS TO TREATMENT GROUPS 79

APPENDIX H: POST EXPERIMENTAL QUESTIONNAIRE 81

LIST OF TABLES

TABLE		PAGE
1	Experimental Conditions	10
2	List of Scores for First Twenty Trials	14
3	Mean Difference Scores After Pre-experimental Phase	21
4	Degree of Certainty of Answers After Pre-experimental Phase	21
5	Distribution of Ratings for Confidence in Ability After Expectancy Manipulation	23
6	Self–Other Difference Scores as a Function of Social Comparison Feedback	25
7	Self–Other Difference Scores as a Function of Evaluation Feedback	26
8	Self–Other Difference Scores as a Function of Both Social Comparison and Evaluation	28
9	Comparison of Cell Means for High and Low Expectancy on Self–Other Difference Scores	30
10	Absolute Difference Scores as a Function of Evaluation and Social Comparison	32
11	Self–Other Difference Scores as a Function of Time	35
12	Mean Self–Other Difference Scores as a Function of Time and Evaluation	36
13	Mean Self–Other Difference Scores as a Function of Both Time and Social Comparison	38
14	Mean Self Scores as a Function of Evaluation and Social Comparison	43
15	Self Scores as a Function of Time	44
16	Other Scores as a Function of Time	48

LIST OF FIGURES

FIGURE		PAGE
1.	Physical Set-up of Experiment	16
2.	Interaction Effects of Social Comparison and Evaluation on Self–Other Differences for High and Low Expectancy	29
3.	High Expectancy Means for Two Levels of Evaluation at Each of Four Levels of Time for Social Comparison–Continues and for Social Comparison–Withdrawn	39
4.	Low Expectancy Means for Two Levels of Evaluation at Each of Four Levels of Time for Social Comparison–Continues and for Social Comparison–Withdrawn	40
5.	Interaction of Time with Social Comparison and Evaluation on Self Scores for High Expectancy	46
6.	Interaction of Time with Social Comparison and Evaluation on Other Scores for High Expectancy	50

CHAPTER I

THE PROBLEM

There has been a continuing interest in the conditions which maintain and/or change an individual's performance expectations, beliefs about one's ability. This problem has been approached from different theoretical perspectives, e.g., social learning theory (Bandura, 1977), and expectation states theory (Berger, 1977 and 1974). These researchers have considered the importance of both objective evaluations and evaluations from social others for the creation and maintenance of expectations. Bandura (1977) also considers the role of social comparison cues in maintaining expectations when objective evaluations are absent. It is surprising, however, that no attention has been given to the possible deteriorating effect of the withdrawal of both social comparison and performance evaluation feedback on expectations.

It is apparent in normal and social situations that certain individuals (i.e., widows, retired executives, and mothers when their last child leaves home) often behave as though the withdrawal of both evaluation and social comparison feedback had active deteriorating properties, at least under certain conditions. For instance when individuals become widows, retired executives or mothers without children at home they may experience a decline in confidence when they no longer have access to evaluations and social comparison cues from other wives, executives and mothers. Presumably when an individual has become accustomed to receiving social comparison and evaluation information the presence of either one becomes important for the maintenance of expectations. A decrease in confidence by these individuals may be explained by changes in the level of their self expectations when customary sources of evaluation and social comparison feedback were simultaneously withdrawn.

This observation, however, is at odds with experimental research by Berger and Associates (1966, 1974). These investigators argue that performance expectations are built up in group interaction and, once established, determine an individual's evaluation of subsequent performance, even when evaluations of others are withdrawn. Supporting this position Lewis (1966) has shown that when objective evaluations are absent subjects behave as if the level of performances of self and other are in accord with their differential expectations even when visual cues indicate the performances of the subjects are equal. Thus high expectation subjects continue to estimate they will do better at the task than low expectation subjects although evaluation feedback is removed. The measure of expectations in the Lewis study is the difference between scores subjects predict for self and other over a series of performances.

This perceptual distortion of performances is not uncommon. William Foote Whyte's (1941) description of the Norton Street Gang's bowling games demonstrates this technique for maintaining status. When other members of the group received higher bowling scores than Doc their scores were verbally discounted as due to "luck" or "chance" or "simply as a quirk of the game". Thus, because of strong group support and a previous history of success, Doc continued to receive evaluations in accord with his initial expectations despite occasional lapses in his level of performance. These distorted evaluations, communicated to Doc, served to maintain his performance expectations. Lewis' research, however, indicates that expectations are maintained even when distorted evaluations are not communicated. Contrary to the social situations observed, then, individuals' judgment of the quality of their performance and confidence in their ability is maintained even though evaluations of others are withheld.

Previous research has, however, paid no attention to social comparison information (Festinger, 1954) which may operate in the experimental setting. Berger and his associates (Berger, Conner and McKeown, 1969; Berger, Conner and Fisek, 1974) argue that expectations are self maintaining, however subjects in their experimental studies continue to receive

social comparison information in the form of disagreement cues, when evaluations are withdrawn. Typically, subjects continue to receive feedback on self–other performances indicating different choices on task alternatives. This information itself may account for the maintenance of expectations and the discrepancy between laboratory and naturalistic observations. Contrary to Berger's position, we believe that the complete removal of these sources of information will produce a decline in expectations for performance. This implies that individuals with high expectations will show a decrease and individuals with low expectations an increase in their level of expectancy. Also, there is reason to believe that the observed reduction in differences will not be as great for the low expectancy group as the high expectancy group (Moore, 1968). An experimental study was conducted to investigate the above considerations.

In brief, the problem deals with the way in which originally established high or low expectations are affected by withdrawal of performance feedback in a situation where social comparison information is either present or absent.

Background

The important role of social evaluation on ability conceptions regarding self and other has long been recognized. Early theorists James (1890), Cooley (1902), Mead (1934) and Sullivan (1953) are largely responsible for the notion that an individual's concept of self is in fact a direct response to the way he has been treated by "significant others".

Following Mead (1934), Berger *et al.* (1966, 1974) have extended the notion of taking the role of other to an "expectation structure of self and other". If one looks at every situation from the point of view of self and if self has received positive evaluations relative to another person, his expectation structure will be high self–low other; i.e., a person will have higher expectations regarding himself than some referent other. The other person's expectation structure, looked at from his point of view, will be low self–high other. The theory assumes that individuals develop beliefs about their level of ability relative to others, based upon evaluations they have received. These beliefs lead to expectations about future

performances. For example, when a person is evaluated as being a good tennis player he is expected to perform accordingly.

Based on Heider's (1944) notion that the evaluation of an act and the evaluation of a person who made the act are not independent, Berger *et al.* examined the role of expectations in determining the evaluations of subsequent performances. This research is relevant to our study because it is concerned with the maintenance of performance expectations in the absence of evaluations. Berger and Snell (1961) demonstrated that there is a predictable relationship between performance expectations and the evaluations of subsequent performances. Their hypothesis is formulated under the following conditions:

1. an actor holds high expectations for himself and low for another about a specific task for which there is only one solution and,

2. he has to evaluate the different solutions given by himself and the other person without having any other criterion but his own expectations.

These researchers hypothesized that under these conditions the actor would tend to assign a high evaluation to his own act and a low one to the act of the other person.

To investigate the above hypothesis Berger and Snell developed a task situation which has since become the standard experimental task used in the Berger group studies. Expectations are created during the first phase of the experiment by providing subjects (Ss) with information indicating that they have done well and the other person, a confederate, has done poorly. During the second phase the Ss are not provided with performance evaluations. The action in the task situation is such that on each trial the Ss choose one alternative solution to an ambiguous task, for which they are told there is only one solution, and are led to believe that the other person chose the other. Each subject is then required to make a final choice. In this situation the Ss do not know which of the two acts is the correct one but are faced with disagreeement which they must take into account in order to make their final decision. The basic data from each subject consists of a series of self (S) responses, indicating the subject stayed with his original choice, and other (O) responses, in-

dicating the subject changed his choice to agree with the other person's. These responses constituted the operationalization of the dependent variable "influence", and Ss with high expectations were expected to stay with their original choice while Ss with low expectations were expected to change their original choice to that of O. Analysis of the S and O responses showed support for their hypothesis that high expectancy subjects would attach a high evaluation to their own performance while low expectation subjects would attach a low evaluation to theirs.

Of particular interest to our investigation is the presence of continual disagreement in the standard experimental situation. After each trial Ss are provided with information that their choice of answer to the particular task was in disagreement with their partner's choice. One of the conditions of the Berger and Snell (1961) model is that Ss are required to evaluate their own and their partner's performance without having any other criterion but their own expectations. In the standard experimental situation Ss are without performance evaluations; however they do have social comparison information. That is, Ss know that the other person has made a decision which is in disagreement with their own. In light of findings by Moore (1968) that agreement information has an eroding effect on prior expectations, it is reasonable to expect that the presence or absence of social comparison information is an important variable affecting subjects' assessment of their ability and, in turn, maintenance of their expectations for future performances.

Social comparison information has been a concern of social psychologists for some time. For example, several theories, e.g., equity theory (see Walster *et al.*, 1973), commitment theory (Keisler, 1971), and Festinger's (1954) social comparison theory, have considered the importance of this variable for social interaction. More specifically for our study, Festinger's social comparison theory suggests that individuals have a drive to determine the correctness of their opinions and to obtain an accurate appraisal of their own abilities. The theory assumes that when objective, non social means are unavailable people evaluate their abilities, and in turn their performances, by comparison with the opinions and abilities of others. Deutsch (1965) notes:

> Festinger draws the interesting conclusion that the drive to evaluate accurately one's own opinions and abilities may, paradoxically, lead one to change them so as to make them closer to the opinions and abilities of others who are available for comparison. He assumes here—without making his assumption explicit—that one way of reducing dissimilarity is to change and become more similar to the others. Another way is to take action to reduce the dissimilarity by changing the others.
>
> (pp. 62–63)

Since in the standard experimental situation described above the actor is unable to change O, Festinger's notion of changing S may account for the convergence of S and O responses following disagreement trials (Moore, 1968).

Consideration of the social comparison process from an expectation state viewpoint raises the question of cognitive balance. It is reasonable to assume that an actor having either high or low expectations for S in comparison to O will expect the performances of O to be in disagreement with his own, and if he receives this information his cognitive state will be in balance. However, if he receives information that O is in agreement his cognitive state will *not* be in balance. Agreement information will produce imbalance, and since the actor cannot change the agreement information the immediate consequence of the imbalance is a change in his expectation state [Heider's (1958) balance theory].

In Heider's system the portion of the actor's cognitive state which is taken into account consists of a) another person and b) an impersonal entity. These are designated by the symbols P, O, and X, respectively. According to the theory a balanced state exists if all three relations are positive, in all respects, or if two are negative and one positive. Thus if P believes that O has less ability than P and O caused X but P agreed with X, then by definition P's cognitive state would be unbalanced. If O caused X and P disagreed with X, then the cognitive structure of P would be balanced. The main assumption is that:

> If no balanced state exists, the forces toward this state will arise. Either the dynamic characters change, or the unit relation will be changed through action or through cognitive reorganization. (By "dynamic characters" Heider means the signs of the relations.)
>
> (Heider, 1958 noted in Evans, 1968, p. 2)

Heider's balance theory, then, suggests that, faced with agreement information Ss will attempt to change the dynamic characters, and Festinger's social comparison theory suggests they will do this by adjusting their beliefs about their own level of ability to bring them into

line with their beliefs about O's ability.

Similarly, applying Festinger's theory, when S has neither social comparison information nor evaluation information his drive to assess accurately his own ability will result in his *changing his beliefs about his own ability to make them more similar to his opinions and beliefs about O's ability.*

This change in assessment of his own ability creates imbalance in his expectation structure resulting in change in expectations. We suggest, then, that withdrawal of performance evaluations is a contributing factor to changes in beliefs about one's ability and, in turn, changes in expectations.

In support of his contention Bilodeau *et al.* (1959) found that Ss who were given knowledge of results of performances to establish confidence in their ability showed a response deterioration after the withdrawal of knowledge of results. In expectation states studies it is typically in the context of disgreement with O that high status people positively evaluate and low status people negatively evaluate their performances. Thus disagreement functions to cue evaluations in agreement with beliefs about ability.

Since expectations, as defined by Berger *et al.*, include beliefs about ability of both S and O, based on evaluations of S and O, they are based on social comparison information as well as evaluation information. It is reasonable to suspect, however, that expectations may also be maintained if self receives evaluations for himself only. This implies that when social comparison information is absent evaluations of S will maintain expectations. Festinger's theory speaks only about ability assessments of S. We assume that S continues to hold his prior assessment of O's ability. Thus if S receives evaluations of his own ability we might expect his S–O expectation structure to be maintained.

Theoretical Model

We proposed, then, that when evaluations for both S and O were withdrawn differential expectations would *be maintained* if either:

1. evaluations for S and social comparison (disagreement) information are both present;

2. evaluations for S in correspondence with previous evaluations received by S are present;

3. social comparison (disagreement) information is present;

and would *be changed* if:

1. social comparison (disagreement) information is absent.

However, although we did not state this as a specific proposition, we expected that expectations would be stronger after evaluation feedback than after social comparison feedback. This would seem reasonable as in the performance criterion the subject receives information on the level of his performance, whereas in the social comparison criterion he can only *infer* from the disagreement information, that performances are in correspondence with prior expectations.

This lack of consideration of the social comparison information in previous research has, we believe, masked the effect of withdrawal of performance evaluations on prior expectations. If this is the case, an experimental study in which social comparison and evaluation information are both varied should, we concluded, reveal this effect.

In summary, building on prior research we designed an experimental study in which both performance evaluations and social comparison information could be manipulated and the effects on prior expectations observed. The hypotheses tested are presented below:

The Hypotheses

Main Effects

Hypothesis 1. Expectations will be maintained at a stronger level when social comparison information is continued than when social comparison information is withdrawn, for both high and low expectation subjects.

Hypothesis 2. Expectations will be maintained at a stronger level when evaluations are continued than when evaluations are withdrawn, for both high and low expectation subjects.

Interaction Effects

Hypothesis 3. The evaluation continued and social comparison continued condition

will maintain expectancy at the strongest level for both high and low expectancy subjects.

Hypothesis 4. The evaluation withdrawn and social comparison withdrawn condition will show the lowest level of expectancy, for both high and low expectancy subjects.

Hypothesis 5. When evaluation is withdrawn and social comparison is withdawn low expectation Ss will show a stronger level of expectancy than high expectation subjects (i.e., it is more difficult to alter low expectations than high).

With respect to our informal proposition that the strength of expectations will not be as great when only social comparison is continued as when only evaluations are continued, we expected that:

> The evaluation continued and social comparison withdrawn condition would show a stronger level of expectancy than the social comparison continued and evaluations withdrawn condition, for both high and low expectancy subjects.

We also expected the strength of expectancy for the four experimental conditions, depicted in Table 1 to be ordered thus:

$$\text{Cell 1} > \text{Cell 2} > \text{Cell 3} > \text{Cell 4}.$$

The foregoing describes the specific areas of concern in designing the experiment. Some theoretical and practical implications of this research will now be presented. The following section describes the method in detail.

Significance of the Research

The areas of concern in this study have importance for social interaction and self-evaluation. Investigation of the effect of withdrawal of social comparison and evaluation information has both theoretical and practical value:

Theoretical:

1. to provide information for an extension to Berger's theory of performance expectations and interaction;

2. to provide information for an extension to Festinger's theory of social comparison;

Table 1

Table of Experimental Conditions

Performance Evaluations	High Expectations (1)		Low Expectations (2)	
	Social Comparison		Social Comparison	
	Disagreement	No Information	Disagreement	No Information
S Continues	1(1)	1(2)	2(1)	2(2)
Withdrawn	1(3)	1(4)	2(3)	2(4)

Practical:

1. to provide an explanation for the lack of confidence as observed in retired executives, widows, and mothers when their last child leaves home.

2. to provide an explanation for an apparent decrease in ability by some students, particularly the previously high achiever.

An understanding of the reaction to withdrawal of performance evaluations should, we believe, help in formulating solutions to previously unexplained problems in human behavior, particularly in the area of social relationships and self-evaluation.

CHAPTER II

METHOD

Subjects

Volunteer subjects were obtained from a "request for volunteers" notice posted in a local high school. The notice advised students that they would be participating in an experiment on visual perception, that the experiment would last approximately forty-five minutes and that they would receive $4.00 for their participation. They were also advised that the experiment would be conducted in their own school during regular hours.

The subjects, forty-eight females and thirty-two males, were selected on the basis of available time and desire to earn money. Each subject was individually contacted by telephone and two Ss (of the same sex) were scheduled for each run of the experiment, one subject for the high and the other for the low expectation condition.

Experimental Design

The experimental design was a 2 x 2 x 2 factorial experiment with two levels of expectancy (high, low), two levels of evaluation (continued, withdrawn) and two levels of social comparison (continued, withdrawn). The expectancy group to which Ss were assigned was determined by flipping a coin. Ss were then randomly assigned to the four treatment groups following the scheme shown in Table 1 and were observed as they performed a distance estimation task requiring answers on forty separate trials as well as predictions for self (S) and other (O) for trials 2 to 41. Predictions began on trial 2 after Ss had received their score for trial 1. The study included two experimental stages as outlined below:

1. **Pre-experimental Stage:**

a. **Expectation Manipulation**

During each run of the pre-experimental stage of the experiment (first twenty trials) the S assigned to the high expectancy condition was given high evaluations at the same time as the S assigned to the low expectancy condition was given low evaluations. The scores provided Ss are shown in Table 2. This manipulation resulted in forty Ss having received high scores and forty having received low scores.

b. **Social Comparison (Disagreement) Manipulation**

During each run of the pre-experimental stage of the experiment the Ss in each of the high and low conditions also received information indicating that their partner's choice was in disagreement with their own. This information was provided by a choice form which also served as a check that E had recorded the Ss choices correctly.

c. **Credibility Manipulation**

At the end of trial 20 the Ss were advised that the first twenty trials had taken longer than expected and were told that for this reason the procedure would be changed slightly for the last half of the experiment. They were, however, instructed to continue to estimate distances and to predict for both S and O as before.

2. **Experimental Stage**

During the experimental stage of the experiment (last twenty trials) forty Ss continued to receive S evaluations as before while the other forty Ss received no evaluations. Of the forty Ss receiving evaluations half of them also continued to receive social comparison information indicating that their choices or answers were in disagreement with those of their partner and the other half received no social comparison information. Similarly, of the forty Ss receiving no evaluations, half received social comparison information indicating disagreement of choices and the other half received no social comparison information. The scores

Table 2

Scores for All Subjects During Trials 1–20 (Creation of Expectations)

Repeated for Condition 1 During Trials 21–40

Trial Number	High Expectancy Subject	Low Expectancy Subject
1	40	20
2	40	20
3	30	10
4	40	20
5	40	20
6	40	20
7	30	30
8	40	20
9	40	20
10	40	20
11	30	10
12	40	20
13	40	20
14	30	30
15	40	20
16	40	20
17	30	10
18	40	20
19	40	20
20	40	20

provided to Ss during this stage of the experiment were identical to the S scores given during the first stage.

Setting and Apparatus

A teachers' meeting room in the subjects' own high school was set up as a laboratory for the duration of the experiment. The room was located far enough away from the regular classrooms and cafeteria that students were not likely to observe the preliminary manipulations of escorting subjects to the laboratory.

When subjects arrived at the experimental room they were seated behind individual tables, separated from one another by a high wooden partition, as indicated in Figure 1. They did not see or interact directly with each other before or during the experiment.

On the table in front of each subject there was a bingo type card with five squares, labelled A, B, C, D, and E, and a black marker (a chessman). The card and marker were used to record the subject's choice (judgement of distance between objects) for each trial of the distance estimation task. There was also a pencil, two sets of forms (one set for the predictions for trials 2 to 41) and the other set for recording the S and O scores for trials 1 to 40) as well as two empty boxes, one labelled "Prediction Box" and the other labelled "Answer Box".

Dependent Variable

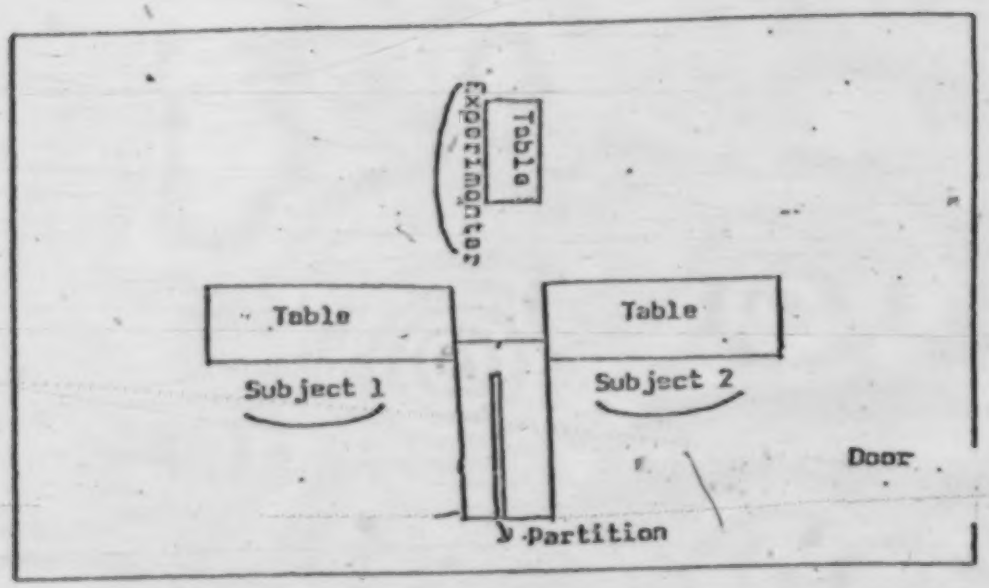
Expectations in this study are operationalized as predictions for future performances. The measure of the dependent variable was the difference between scores predicted for S and scores predicted for O for trials 21 to 41.

Procedure

Each pair of Ss was administered a twenty-trial series with one subject receiving positive evaluations and one receiving negative evaluations from the experimenter (E). Ss then had a second twenty-trial series using the same stimuli, either with or without social comparison information and with or without evaluation information.

Figure 1

The Physical Set-up



The task used was a distance estimation task developed by L. Goetz (1974) and was specifically constructed to be both novel and ambiguous. These characteristics made it possible for E to manipulate the scores in the manner required by the experimental design because Ss could not tell from the task materials alone, whether they were right or wrong. (See Appendix A for a discussion of the test set-up.)

The Ss participated in the experiment in groups of two and in order to ensure that they did not know the identification of their partner one of the subjects was met by the researcher and the other by her assistant at separate pre-determined areas of the school. They were then escorted separately to the room designated as a laboratory. Upon arrival at the laboratory they were seated on either side of a partition (see Figure 1–physical set-up) and given identification numbers (Number 1 if assigned to high expectations and number 2 if assigned to low expectations).

Ss were first required to read an "Introduction to the Study" (See Appendix B) which outlined the purpose of the experiment and explained their participation. In order to ensure that they had understood the purpose of the study Ss replied to questions posed them by E (see Appendix C). Ss were then introduced to the experimental procedure and to E and the assistant. The instructions to Ss and the details of the procedure for the experiment are reproduced in Appendix D.

The experimental instructions were designed to increase credibility about the experimental situation in general and the experimental task in particular. Ss were led to believe that:

1. There existed a specific ability such as the one to which they were being introduced.
2. The ability was instrumental to the solution of the task they were asked to perform.
3. The task constituted a reliable test of the amount of the ability they had.
4. The ability is important, that is, having a high state of it is positively evaluated.
5. The more ability a person had the better the performance.

After hearing the experimental instructions Ss were allowed two practice trials, after

which they completed a questionnaire with respect to their conception of their own ability at this point (see Appendix E).

During the experimental trials Ss were shown a series of post cards on which two objects (for example, a boat and a house) were joined together by a straight line. The task was to estimate the distance between the two ends of the line. In each case Ss were asked to select one of the five estimated distances listed on the back of the post card. Ss could receive any of the following scores: 40, 30, 20, 10, or 0), depending on the accuracy of their answers (scores are shown in Table 2).

When Ss had made their choice and received their score for one trial they were instructed to make predictions for each subsequent trial on the basis of the scores they thought both of them would probably get, not what they hoped to receive. Ss wrote their predictions for each trial on a separate form and these were filed in the prediction box. This procedure was followed for the first twenty trials.

Upon completion of the pre-experimental stage of the experiment Ss were asked to complete a questionnaire which was designed to determine the effectiveness of the expectation manipulation (see questionnaire in Appendix F).

Following a short break Ss were advised of the changes to be made in the procedure for the last twenty trials. The instructions provided to each treatment group are presented in Appendix G.

During the experimental stage of the study Ss were administered the distance estimation task as before with the same stimulus. They continued to indicate their answers on the bingo type board and to make predictions for preceding trials. On trial 40 they predicted for trial 41 as if there was going to be one.[1]

---

[1]The decision to predict for trial 41 was based on the desirability of having equal numbers of predictions for both stages of the study. Predictions began for trial 2 as prior to receiving their score for trial 1 the S was in possession of no information on which to base a prediction. (Foschi, 1970)

Post-experimental Questionnaire

Following predictions for trial 41 Ss were asked to respond to a questionnaire which was constructed to test the effectiveness of the treatment manipulations and to assess subject suspicion of experimental procedures. (Appendix G outlines the questionnaire.)

De-briefing Session

In order to avoid revealing the purpose of the study, all participants were de-briefed at a group session at the conclusion of the study. In the session E presented a brief overview on experimental research in sociology, discussed the theoretical framework as well as the design of the study and answered questions posed by the subjects.

Some of the substantive areas dealt with by sociology, such as communication networks, conformity, cooperation and expectations were discussed with Ss. It was explained that few experiments of this nature were undertaken in a high school therefore their participation in this study was somewhat unique. E then explained the true purpose of the experiment and discussed the necessity for the deception. Ss were informed of some of the ethical considerations involved in deception, particularly the need for in-depth de-briefing.

Finally, it was emphasized that there was no way of determining the quality of their actual performances and that the scores received either during the first or second part of the experiment were in no way indicative of their ability to estimate distances.

CHAPTER III

RESULTS

Removing Suspicious Subjects

An analysis of the post-experimental interview showed that only two experimental subjects were suspicious (one subject suspected that the ability described by the researcher did not exist and that bogus scores were assigned, and the other discovered the real nature of the experiment). The data for these subjects was eliminated from the data to be analyzed.

De-briefing Session

None of the Ss expressed any resentment at having been deceived. On the contrary, most Ss expressed a good deal of interest in the design and questioned the experimenter at some length regarding several of the methodological details.

Manipulation Check

A check on the expectation manipulation was provided by the scores predicted for self and other during the pre-experimental stage of the study (trials two to twenty-one), and by the ratings on questions answered by subjects immediately following trial twenty.

The self–other difference scores for the pre-experimental stage are shown in Table 3. Both the high and low expectancy subjects reached the expectancy assigned to them. The mean of the high expectancy group shows a positive score and the mean of the low expectancy group shows a negative score. To determine if the strength of the manipulation was equal for highs and lows an analysis of variance was performed on the absolute differences. The data indicated that the low expectancy group estimated a greater difference between self and other than the high expectancy group, $F(1,77) = 6.425$, $p < .01$.

Table 3

Difference Scores After Expectation Manipulation

State	N	SD	Mean
High Expectancy	40	3.2660	14.6375
Low Expectancy	39	10.0651	-16.4744

Table 4

Degree of Certainty in Answers After Pre-experimental Phase

State	N	SD	Mean
High Expectancy	40	1.763	5.625
Low Expectancy	39	2.049	3.718

Table 4 shows the confidence of high and low expectancy subjects immediately following trial twenty. The question was,

> "On trials one to twenty how certain were you that the answers you chose were correct?" (very certain 7, to very uncertain 1).

As expected, high expectancy subjects were quite certain about answers while low expectancy subjects were uncertain, $F(1,77) = 38.597$, $p < .01$. A second confidence measure assessed whether subjects perceived their changing ability at the task. Table 5 presents the distribution of ratings on the question:

> "During trials one to twenty how would you describe your confidence in your ability?" (increased 1, remained the same 2, decreased 3).

It is clear from Table 5 that none of the high expectancy subjects indicated a decrease in confidence and none of the low expectancy subjects indicated an increase in confidence, which provides support for the expectation manipulation. As expected, the high expectancy subjects tended to show an increase in confidence and the low expectancy subjects a decrease in confidence. A chi-square test of the data in Table 5 showed that confidence ratings were not independent of expectancy, $X^2(df=2) = 54.99$, $p < .001$, indicating that subjects perceived their changing ability at the task. The strength of the manipulation, however, appears to be different for the high and low expectancy groups. Seventy-eight percent of the forty subjects in the high expectancy group showed an increase in confidence and only fifty-four percent of the thirty-nine subjects in the low expectancy group showd a comparable decrease in confidence. Also, only twenty-three percent of the high expectancy group as opposed to forty-six percent of the low expectancy group indicated their confidence remained the same.

Section 1 of Analyses

Analysis of Self–Other Difference Scores

As mentioned in the methods section above, the dependent variable was the mean difference between scores predicted for self and other during the experimental stage (trials

Table 5

Distribution of Ratings for Confidence in Ability After Expectancy Manipulation

Expectancy	Confidence			Total
	Increased	Remained the Same	Decreased	
High	31 (77.5)*	9 (23.0)	0 (0.0)	40
Low	0 (0.0)	18 (45.2)	21 (53.8)	39
				79 (100.00)

*Note: percentage based on row totals

22 to 41). The initial analysis of variance indicated no significant effect for sex, $F(1,78) = 0.949$, $p < .333$. Therefore, male and female scores are pooled for the subsequent analysis. A two-way analysis of variance[2] was performed, with social comparison (continued, withdrawn) and performance evaluation (continued, withdrawn) as the factor variables. Because of the problem of the positive scores for the high group and negative scores for the low group cancelling each other out, analysis of variance was performed on the high and low expectancy groups separately.

Main Effects of Social Comparison

The mean difference scores when social comparison is withdrawn and continued, are shown for high and low expectancy subjects in Table 6. The main effect for social comparison on high expectancy subjects, $F(2,35) = 32.27$, $p < .001$, shows that these subjects reduce the difference between scores predicted for self and other when social comparison information is withdrawn. The main effect for social comparison on the low expectancy subjects, $F(1,35) = 9.118$, $p < .001$, also reveals a reduction in the self–others difference scores when social comparison information is withdrawn. These results confirm Hypothesis 1, which states that the difference scores predicted for self and other will be greater after social comparison is continued than after social comparison information is withdrawn.

Main Effects of Evaluation

Table 7 presents the mean difference scores for both high and low expectancy subjects when evaluation is continued and withdrawn. The main effect of performance evaluation on high expectancy subjects, $F(1,35) = 37.246$, $p < .001$, also indicates that this group reduces the difference between self and other scores when evaluation is withdrawn. The main effect of evaluation for the low expectancy subjects, $F(1,35) = 12.42$, $p < .001$ shows that these subjects reduce the difference between self and other scores as well. These

---

[2]Regression analyses were employed for unequal N.

Table 6

Self–Other Difference Scores as a Function of Social Comparison Feedback

State	Social Comparison				
	N	Continued	SD	Withdrawn	SD
		Mean		Mean	
High Expectancy	40	14.83	4.1463	7.35	7.9628
Low Expectancy	39	-16.32	6.4630	-12.58	4.3691

Table 7

Self–Other Difference Scores as a Function of Evaluation Feedback

State	Performance Evaluation				
	N	Continued	SD	Withdrawn	SD
		Mean		Mean	
High Expectancy	40	15.270	5.1453	6.900	6.8337
Low Expectancy	39	-17.132	2.9946	-11.800	6.6301

findings support Hypothesis 2, which states that the difference between scores predicted for self and other will be greater after evaluation is continued than after evaluation is withdrawn.

Interaction Effects of Evaluation and Social Comparison

The data show an interaction of social comparison and evaluation for the high expectancy subjects, $F(1,36) = 37.25$, $p < .001$, and no interaction for the low expectancy subjects, $F(1,35) = 2.659$, $p < 0.112$. Table 8 presents the mean difference scores for both high and low expectancy subjects. The withdrawal of both social comparison and evaluation information results in the least difference between self and other scores for both high and low expectancy subjects. Figure 2 depicts the data of Table 8. It is clear that the high expectancy subjects show a greater decline in difference scores than the low expectancy subjects when both social comparison and evaluation information are withdrawn.

Scheffe comparisons on the cell means are shown for the high and low expectancy subjects in Table 9. The only comparisons that achieve significance are those between group 4 (social comparison and evaluation both withdrawn) and each of the other groups. Therefore, Hypothesis 3, which states that the difference between scores predicted for self and other will be greater when social comparison and evaluation continues (group 1) than in any of the other conditions, is not supported. However, Hypothesis 4, which states that subjects will show the least difference when social comparison and evaluation are both withdrawn, is supported by the data in Table 9. It is clear from the table that the difference scores for group 4 are significantly lower than for any of the other groups.

Comparison between the "evaluation continued, social comparison withdrawn" condition (group 2) and "evaluation withdrawn, social comparison continued" treatment (group 3), designated in Table 9 does not achieve significance. This is contrary to our assumption that evaluation information with social comparison withdrawn will be more effective in maintaining expectancy than social comparison with evaluation withdrawn. However, it is clear from Table 9 that the ordering of the mean difference scores for the four experi-

Table 8

Self–Other Difference Scores as a Function of Both Social Comparison and Evaluation Information

State	Performance Evaluations	Social Comparison	
		Continued	Withdrawn
		Mean	Mean
High Expectancy	Continued	17.050	13.490
	Withdrawn	12.600	1.200
Low Expectancy	Continued	-17.833	-16.500
	Withdrawn	-14.950	-8.650

Figure 2

Interaction Effect of Social Comparison and Evaluation on Self–Other Difference Scores for High Expectancy (HE) and Low Expectancy (LE) Subjects

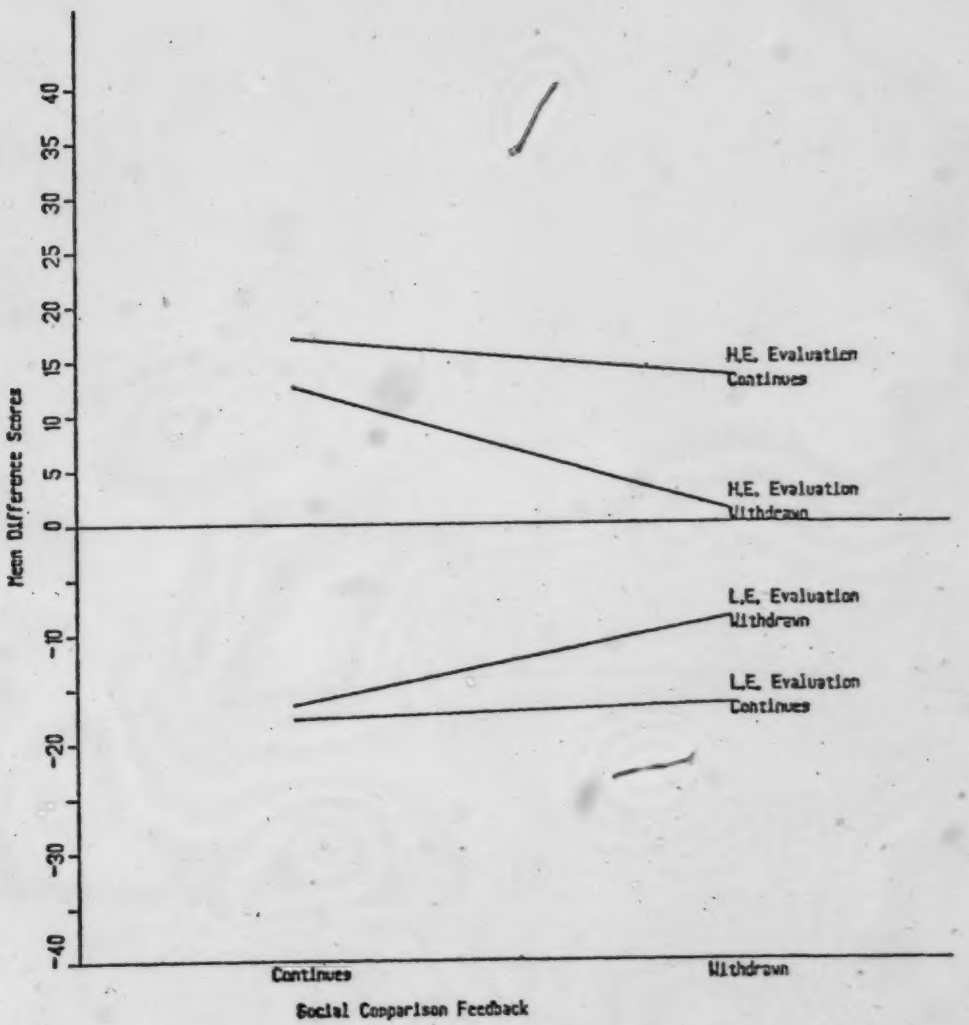


Table 9

Comparison of Cell Means for High and Low Expectancy Subjects, on S–O Difference Scores

Expectancy	Group 1 Evaluation & Comparison	Group 2 Evaluation & No Comparison	Group 3 Comparison & No Evaluation	Group 4 No Evaluation & No Comparison	df	MS_w
	Mean	Mean	Mean	Mean		
High	17.05_a	13.49_a	12.60_a	1.200_b	3,36	18.21
Comparison				F		
Group 1 vs. Group 2				3.50		
Group 1 vs. Group 3				5.47		
Group 1 vs. Group 4				69.40**		
Group 2 vs. Group 3				.219		
Group 2 vs. Group 4				41.72**		
Group 3 vs. Group 4				43.69**		
Low	-17.83_a	-16.50_a	-14.95_a	-8.65_b	3,35	22.56
Comparison				F		
Group 1 vs. Group 2				0.373		
Group 1 vs. Group 3				1.8422		
Group 1 vs. Group 4				18.690**		
Group 2 vs. Group 3				0.5358		
Group 2 vs. Group 4				13.655**		
Group 3 vs. Group 4				8.7948*		

**Achieves significance at .01 level
*Achieves significance at .05 level
Note: Any mean with a different subscript differs significantly.

mental conditions was as predicted: group 1 > group 2 > group 3 > group 4, although the difference between groups 1, 2 and 3 do not achieve significance.

Apparently both the high and low expectancy subjects maintained their expectancy equally well when they continued to receive both social comparison and evaluation information, only evaluation information, or only social comparison cues. Expectancy declined only when evaluation *and* social comparison information were simultaneously withdrawn.

Analysis of Self–Other Absolute Difference Scores

Because of the desirability of including high and low expectancy subjects in a single experimental design further analyses were performed on the absolute difference in a three-way analysis of variance design with expectancy (high, low), performance evaluation (continued, withdrawn) and social comparison (continued, withdrawn). Analyses on the absolute scores did not, however, substantially change the results of the separate analyses.

Effects of Social Comparison on Absolute Difference Scores

Analysis of variance on the absolute differences for social comparison continued ($M = 15.55$) and for social comparison withdrawn ($M = 10.510$) indicated a significant effect, $F(1,78) = 28.57$, $p < .001$. This effect of social comparison was previously indicated for high and low expectancy subjects in the separate analyses.

Effects of Evaluation on Absolute Difference Scores

The absolute differences for "evaluation continued" ($M = 16.78$) and "evaluation withdrawn" ($M = 9.900$) indicated, in accord with the separate analyses, a significant effect for evaluation, $F(1,78) = 43.661$, $p < .001$.

Effects of Evaluation and Comparison on Absolute Difference Scores

The combined high and low expectancy subjects' absolute difference scores resulting from the interaction of evaluation and social comparison are shown in Table 10. Analysis of variance on the data in Table 10 revealed a significant interaction of social comparison with evaluation, $F(1,78) = 7.562$, $p < .008$.

Table 10

Absolute Difference Scores as a Function of Evaluation and Social Comparison

Evaluation	Social Comparison				
	N	Continued	SD	Withdrawn	SD
		Mean		Mean	
Continued	79	17.421	3.1502	15.045	4.9322
Withdrawn	79	13.775	4.4941	8.425	5.4034

Interaction of Expectancy with Social Comparison and with Evaluation

Results from the combined analysis on the absolute scores showed no significant interaction of expectancy and social comparison, $F(1,78) = 2.531$, $p < 0.116$. The interaction of expectancy and evaluation was also nonsignificant, $F(1,78) = 1.561$, $p < 0.216$.

Effects of Expectancy on Absolute Differences

As expected, the absolute difference score for high expectancy subjects ($M = 11.51$) and for low expectancy subjects ($M = 14.26$) were sufficiently different to yield a significant effect for expectancy, $F(1,78) = 10.723$, $p < .002$.

In addition to the analysis of variance, a t-test revealed a significant difference between the means of high expectancy ($M = 2.900$) and low expectancy ($M = 9.150$) subjects when both evaluation and social comparison information were withdrawn, $t = 3.13$, $df \neq 12$, $p < .009$. This finding supports Hypothesis 5, which states that the difference between scores predicted for self and other, when both social comparison and evaluation information are withdrawn, will be greater for the low expectancy subjects than the high expectancy subjects. It is clear from the analyses of absolute scores, as well as the separate analyses, that the high expectancy subjects show a greater decline in expectancy than the increase shown by low expectancy subjects, when both social comparison and evaluation information are withdrawn.

Process Analysis

Although the theoretical formulation underlying this study did not address the temporal or process aspects of the subjects' behavior in this experiment, additional analyses were performed on the self–other difference scores. A repeated measures analysis of variance was conducted with two levels of evaluation, two levels of social comparison and four five-trial blocks as the repeated factor. Since the main effects have previously been discussed, the present analysis addresses the main effect of time and the interaction of evaluation and social comparison with time.

Effects of Time on Expectancy

The mean difference between self and other for the four blocks of trials are shown for high and low expectancy subjects in Table 11. The main effect of time for high expectancy subjects, $F(3,213) = 13.117$, $p < .001$, shows that high expectancy subjects reduced the difference between scores predicted for self and other over time. The main effect of time for the low expectancy subjects, $F(3,213) = 3.992$, $p < .01$, also indicated a reduction of difference over time. Although low expectancy subjects reduced self–other differences during each of the first three time blocks the trend is not exactly linear since the last trial block had an increase in the mean difference. On the other hand, high expectancy subjects show a steady reduction in difference scores over each time block with the last time block showing the smallest difference score.

Effects of Time and Evaluation on Expectancy

Table 12 presents the mean self–other differences for both high and low expectancy subjects as a function of evaluation and time. Analysis of variance on the data in Table 12 yielded a significant interaction of time and evaluation for high expectancy subjects, $F(3,108) = 8.016$, $p < .001$. It can be seen from the table that subjects did not reduce self–other differences over trial blocks when evaluation was continued but, as demonstrated in the earlier analysis of time, showed a linear decrease in differences when evaluation was withdrawn indicating a trend over the four trial blocks. The low expectancy subjects, however, show a similar reduction in self–other differences over time whether evaluation is continued or withdrawn. The results of the analysis revealed no significant interaction of time and evaluation for the low group, $F(3,205) = 1.240$, $p < 0.299$. In contrast to the high group who appear to change their difference scores gradually over time, it is worth noting that the low group immediately alters the differences between self and other when evaluation is withdrawn but there is *no* change in the difference over time.

Effects of Time and Social Comparison on Expectancy

The mean difference scores for social comparison continued and withdrawn over

Table 11

Self–Other Difference Scores as a Function of Time

Expectancy	Time Mean Difference			
	Trial 22–26	Trial 27–31	Trial 31–36	Trial 37–41
High	13.40	11.60	10.29	9.05
Low	-15.74	-13.54	-13.33	-14.97

Table 12

Self–Other Difference Scores as a Function of Both Time and Evaluation

Expectancy	Evaluation	Time			
		Time 1	Time 2	Time 3	Time 4
		Means			
High	Continued	15.80	15.40	14.98	14.90
	Withdrawn	11.00	7.800	5.600	3.200
Low	Continued	-18.00	-15.684	-16.316	-18.526
	Withdrawn	-13.600	-11.500	-10.500	-11.600

time are presented for high and low expectancy subjects in Table 13. Analysis of variance revealed an interaction of time and social comparison for the high group, $F(3,108) = 19.537$, $p < .001$. It is clear from the table, in accord with the above trend, high expectancy subjects also reduce the difference between self and other over time when social comparison is withdrawn. As in the previous discussion the trend over the trial blocks indicated a linear relationship between time and social comparison for the highs, showing the greatest reduction in difference scores in the last trial block. The analysis also indicated an interaction of time with social comparison, for the low expectancy subjects, $F(3,105) = 3.122$, $p < .03$. The process for this group appears to be a gradual decline, although not as pronounced as the high expectancy group. Also the trend is not entirely linear since trial block four is not the lowest of the time periods.

Effects of Social Comparison, Evaluation and Time on Expectancy

The interaction of time with evaluation and comparison for the high expectancy subjects is depicted in Figure 3. The fact that the two figures differ in form tells us that the evaluation and time interaction was not the same when social comparison information was continued as when it was withdrawn. Analysis of variance yielded a three-way interaction of social comparison, evaluation and time for the high expectancy subjects, $F(3,108) = 16.206$, $p < .001$. In "A" of Figure 3 it appears that there is basically no difference in self–other predictions over time between "evaluation continued" and "evaluation withdrawn" conditions when social comparison is continued. However, again we see the same pattern repeated. There is a steep decline in difference scores over time when evaluations are withdrawn at the same time as social comparison is withdrawn.

Figure 4 shows the interaction of time with evaluation and social comparison for the low expectancy subjects. The interaction of these three variables is significant for this group as well, $F(3,105) = 2.900$, $p < .038$. It is clearly demonstrated in Figure 4 that the difference scores for this group over time depend on whether social comparison information is continued, see "A" of Figure 4, or withdrawn, see "B" of Figure 4. It is apparent that the

Table 13

Self–Other Difference Scores as a Function of Both Time and Social Comparison

Expectancy	Social Comparison	Time			
		Time 1	Time 2	Time 3	Time 4
		Means			
High	Continued	14.600	14.100	15.500	15.100
	Withdrawn	12.200	9.100	5.080	3.000
Low	Continued	-16.947	-14.421	-16.526	-17.368
	Withdrawn	-14.600	-12.700	-10.300	-12.700

Figure 3

High Expectancy Means for Levels of Evaluation at Each Level of Time for Social Comparison Continued and Comparison Withdrawn

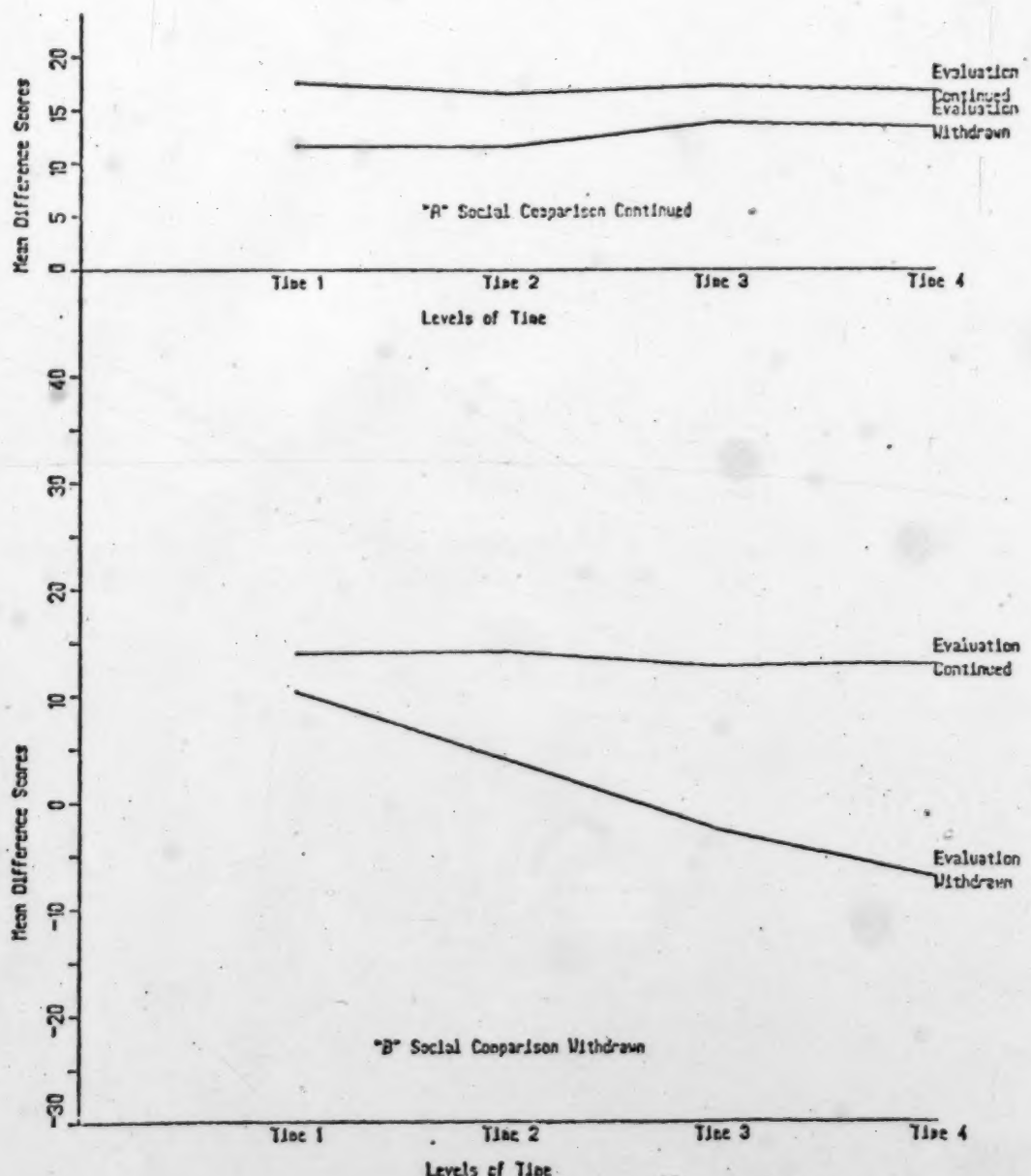
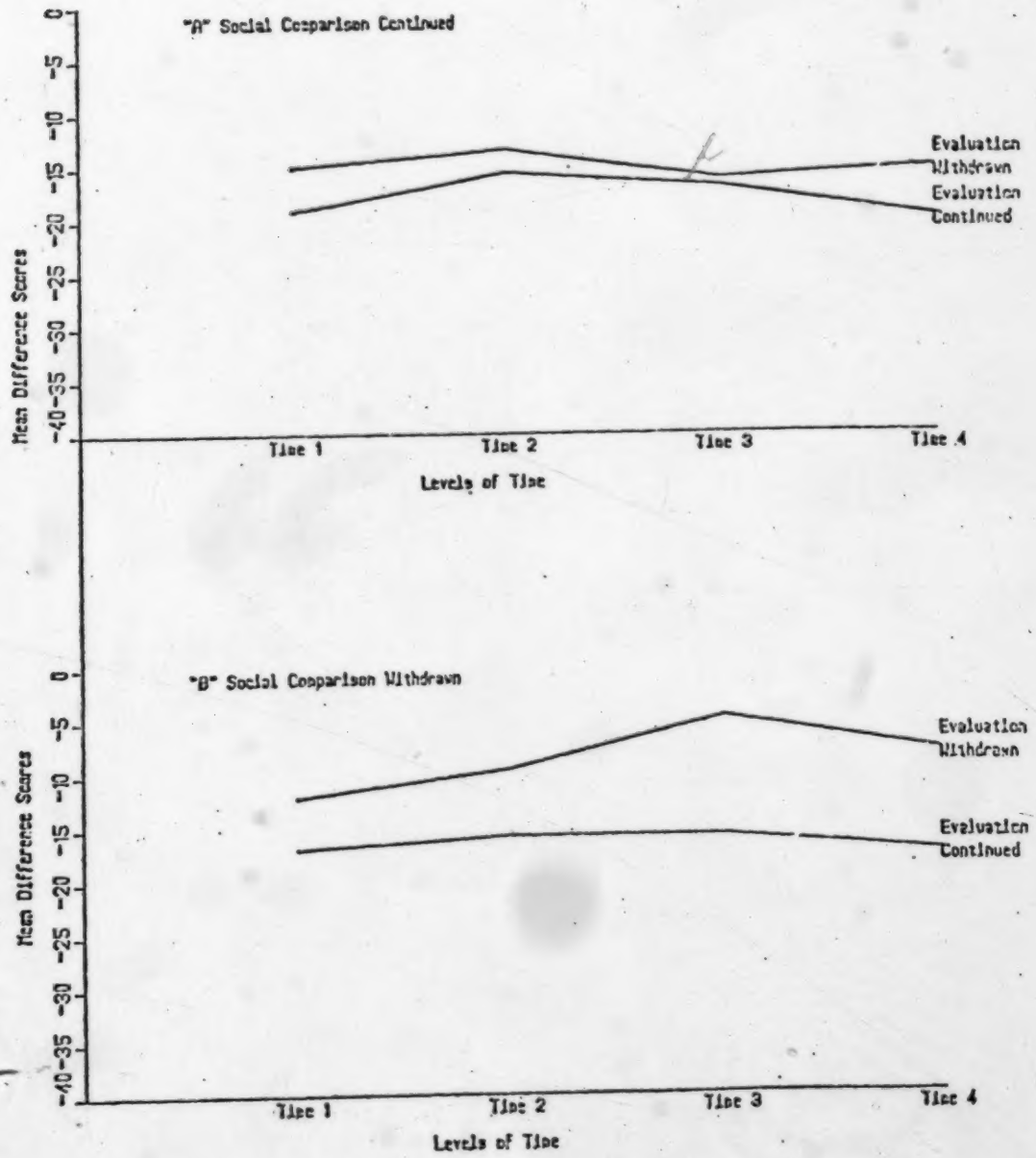


Figure 4

Low Expectancy Means for Levels of Evaluation at Each Level of Time for Social Comparison Continued and Comparison Withdrawn



difference scores over time when social comparison is continued show about the same change from Time 1 to Time 4 for "evaluation continued" as for "evaluation withdrawn" although there is some fluctuation over the other trial blocks. In contrast, when social comparison is withdrawn, changes in difference scores over time are more pronounced when evaluation is withdrawn than when evaluation is continued, see "B" of Figure 4. In accord with previous analyses in this study it should be noted that again the declining trend over the first three trial blocks is broken for trial block 4 by an increase in difference scores. It can be seen that the declining trend for the high expectancy subjects, illustrated in "B" of Figure 3, is different from the declining trend for the low expectancy subjects, illustrated in "B" Figure 4. There was, as noted earlier, a two-way interaction of time with social comparison for this group.

Section 2 of Analyses

In relation to social comparison theory, the model suggested in this study predicts that changes in self–other differences resulted mostly from a decline in self scores for the high expectancy subjects, and an increase in self scores for the low expectancy group. In order to test this assumption, and also to examine the contribution of other scores, a separate repeated measures analysis of variance was conducted on both self and other scores for high and low expectancy subjects.

Effects of Social Comparison on Self Scores

As anticipated, the self scores for the high expectancy group were significantly lower when social comparison was withdrawn ($M = 36.575$) than when social comparison was continued ($M = 32.325$), $F(1,36) = 16.290$, $p < .001$. The decline in self scores for these subjects indicates that they experienced a decline in confidence when social comparison was withdrawn. Also, the low expectancy group showed an increase in self scores from "social comparison continued" ($M = 23.250$) to "social comparison withdrawn" ($M = 25.237$), $F(1,35) = 4.71$, $p < .04$, indicating an increase in confidence in their ability when social

comparison was withdrawn. These findings are in accord with the theory of social comparison considered here.

Effects of Evaluation on Self Scores

The high expectancy subjects also lowered their self scores more when evaluation was withdrawn (M = 30.900) than when evaluation was continued (M = 38.00), $F(1,36) = 45.462$, $p < .001$. This suggests a decline in confidence when evaluation was withdrawn. On the other hand, self scores for the low expectancy group showed a significant increase when evaluation was withdrawn (M = 23.650) from when evaluation was continued (M = 20.711), $F(1,35) = 10.716$, $p < .002$. It appears that the withdrawal of the evaluation occasioned an increase in confidence for the low expectancy subjects as well. The results for the effect of evaluation also provided support for the social comparison model.

Effects of Social Comparison and Evaluation on Self Scores

Table 14 shows the cell means for the interaction of social comparison and evaluation on self scores for high and low expectancy subjects. As in the analysis of variance of self–other differences the analysis on self scores showed a significant interaction for high expectancy subjects, $F(1,36) = 5.865$, $p < .02$. This finding indicates that the decline in self scores for high expectancy subjects was greater when both evaluation and social comparison were withdrawn than would be expected from the separate effects of social comparison and evaluation. Data from the analysis on low subjects' self scores also conform with analysis of self–other difference scores, revealing no significant interaction between social comparison and evaluation, $F(1,35) = 1.311$, $p < .260$.

Effects of Time on Self Scores

Table 15 presents the mean self scores for the four trial blocks. High expectancy subjects show a gradual decline in self scores over trial blocks, $F(3,108) = 16.179$, $p < .001$. However, there is no increase in self scores for low expectancy subjects, $F(3,105) = 1.448$, $p < 0.233$. Low expectancy subjects do not appear to increase their confidence in their

Table 14

Self Scores as a Function of Evaluation and Social Comparison

Expectancy	Evaluation	Social Comparison	
		Continued	Withdrawn
		Mean	Mean
High	Continued	38.850	37.150
	Withdrawn	34.300	27.500
Low	Continued	20.222	21.150
	Withdrawn	22.150	25.150

Table 15

Self Scores as a Function of Time

Expectancy	Time Levels			
	Time 1	Time 2	Time 3	Time 4
High	35.900	35.200	33.750	32.950
Low	21.641	22.256	22.923	22.051

ability to perform the experimental task over time.

Effects of Self Scores of Time with Evaluation and with Comparison

Analyses of variance on the self scores revealed a significant interaction between evaluation and time for the high expectation Ss, $F(3,108) = 16.004$, $p < .001$, and also between social comparison and time, $F(3,108) = 21.623$, $p < .001$.[3] This finding shows that the effects of time with evaluations and time with social comparison are greater than one would expect from their combined separate effects. There was, however, no interaction between evaluation and time, and social comparison and time for the low expectancy subjects.

Effects of Social Comparison, Evaluation and Time on Self Scores

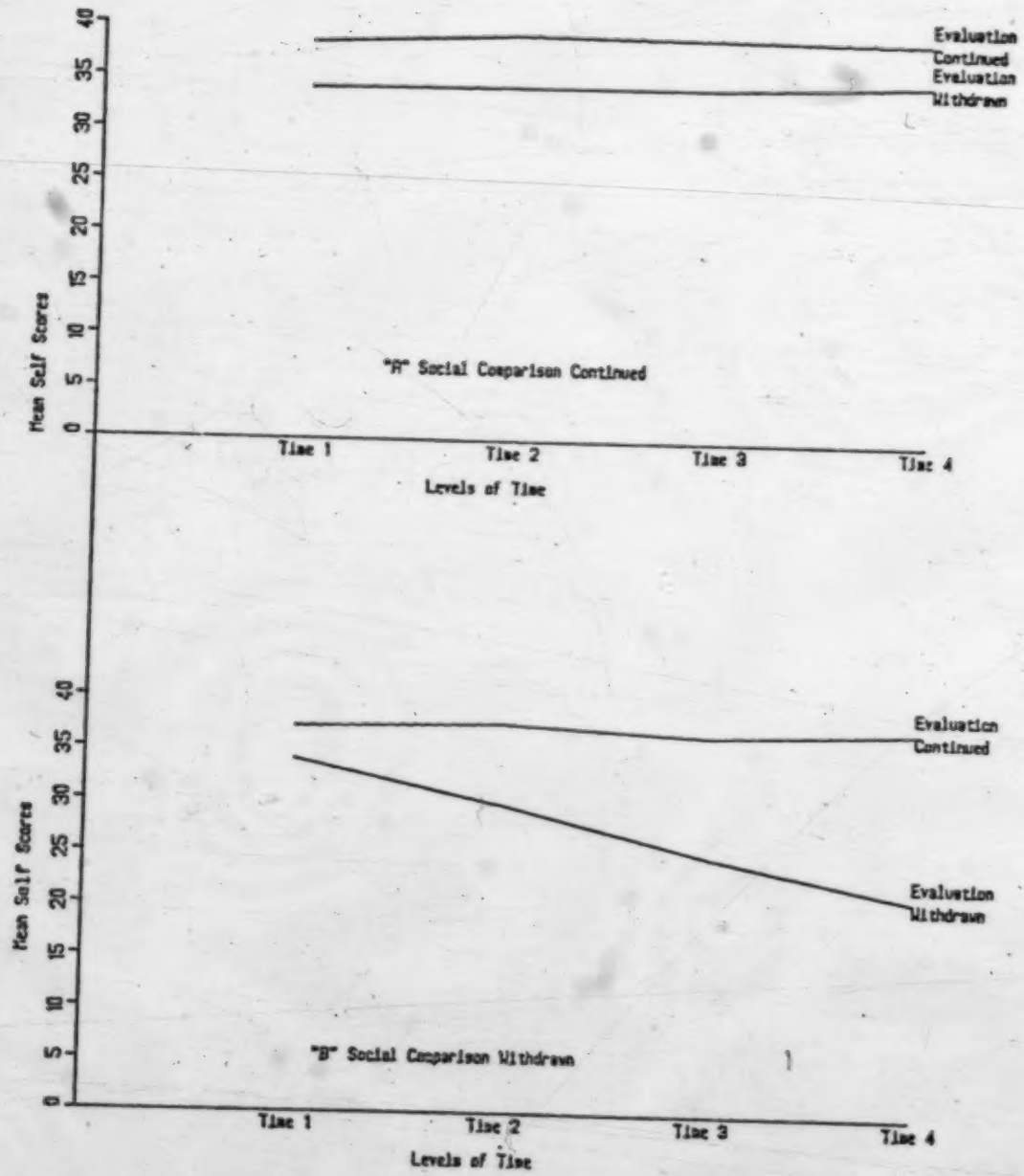
The three-way interaction of evaluation, social comparison and time on self scores for high expectancy subjects is portrayed in Figure 5, the significant interaction for high expectancy subjects, F(3,108), indicates that evaluation interacts with time differently when social comparison is continued or is withdrawn. Figure 5a suggests that when social comparison continues, evaluation does not interact with time. Basically the effects of time are the same for each level of evaluation. However, when social comparison is withdrawn (see Figure 5b), evaluation *does* interact with time. The effects of time are different for the two levels of evaluation. It can be seen from Figure 5b that when social comparison is withdrawn self scores decline more over time when evaluation is withdrawn than when it is continued but the decline is not exactly linear as the fourth trial block shows an increase in self scores. With respect to the low expectancy subjects' self scores the interaction of time with social comparison and evaluation was non-significant, $F(3,105) = 1.447$, $p < 0.233$.

---

[3]Since this interaction was similar to that presented in Figure 2 the S scores depicting it are not graphically shown.

Figure 5

Interaction of Time with Social Comparison and Evaluation on Self Scores
High Expectancy



Effects of Social Comparison on Other Scores

The predictions for other, by the high expectancy subjects, when social comparison was withdrawn were significantly higher (M = 24.980) than when social comparison information was continued (21.750, $F(1,36) = 11.573$, $p < .02$. It appears that the high expectancy subjects increase their predictions for others. That is, they indicate they expect the other person to do better than he was previously doing. Also, low expectancy subjects show a lower score (approaching significance) for other when social comparison is withdrawn (M = 35.725) than when social comparison is continued (M = 37.553), $F(1,35) = 3.737$, $p < .06$. When social comparison is withdrawn, low expectancy subjects not only increase their self estimates, but also attribute a decline in performance to the other person.

Effects of Evaluation on Other Scores

The data showed no significant difference in other scores for high expectancy subjects when evaluation was withdrawn (M = 24.00) nor when evaluation was continued (M = 22.730), $F(1,36) = 1.790$, $p < 0.189$. Apparently the withdrawal of evaluation does not alter the performance attributed to other for these subjects. On the other hand the low expectancy subjects' predictions for other when evaluations were withdrawn (M = 35.450) were significantly lower than when evaluations were continued (M = 37.553), $F(1,35) = 6.286$, $p < .017$. It appears that when evaluations were withdrawn the low expectancy subjects' estimates of the ability of their high expectancy partner decreased.

In summary, when evaluations were withdrawn the high expectancy subjects decreased the level of their predictions for self but they did not change the level of their predictions for other. The low expectancy subjects, in contrast, increased their self scores but they also decreased their other scores.

Effects of Time on Other Scores

Table 16 presents the mean other scores for the four time periods. Although the high expectancy subjects' other scores in the table appear to increase, analysis of variance on the data revealed no significant difference over time, $F(3,105) = 1.673$, $p < 0.158$. Ana-

Table 16

Other Scores as a Function of Time

Expectancy	Time Intervals			
	Time 1	Time 2	Time 3	Time 4
High	22.500	23.600	23.460	23.900
Low	37.385	35.795	36.256	37.026

lysis of variance on the low expectancy subjects' predictions for other, however, showed a significant effect of time for this group, $F(3,105) = 2.947$, $p < .036$. It can be seen from the table that the low expectancy subjects reduced their other scores on the second trial block but returned to the original level by the end of the study. This finding accounts for the significant effect of time on self–other difference scores, indicating that changes in difference scores resulted from changes in predictions for other since there was no significant effect of time on self scores.

Effects of Two-way Interactions on Other Scores

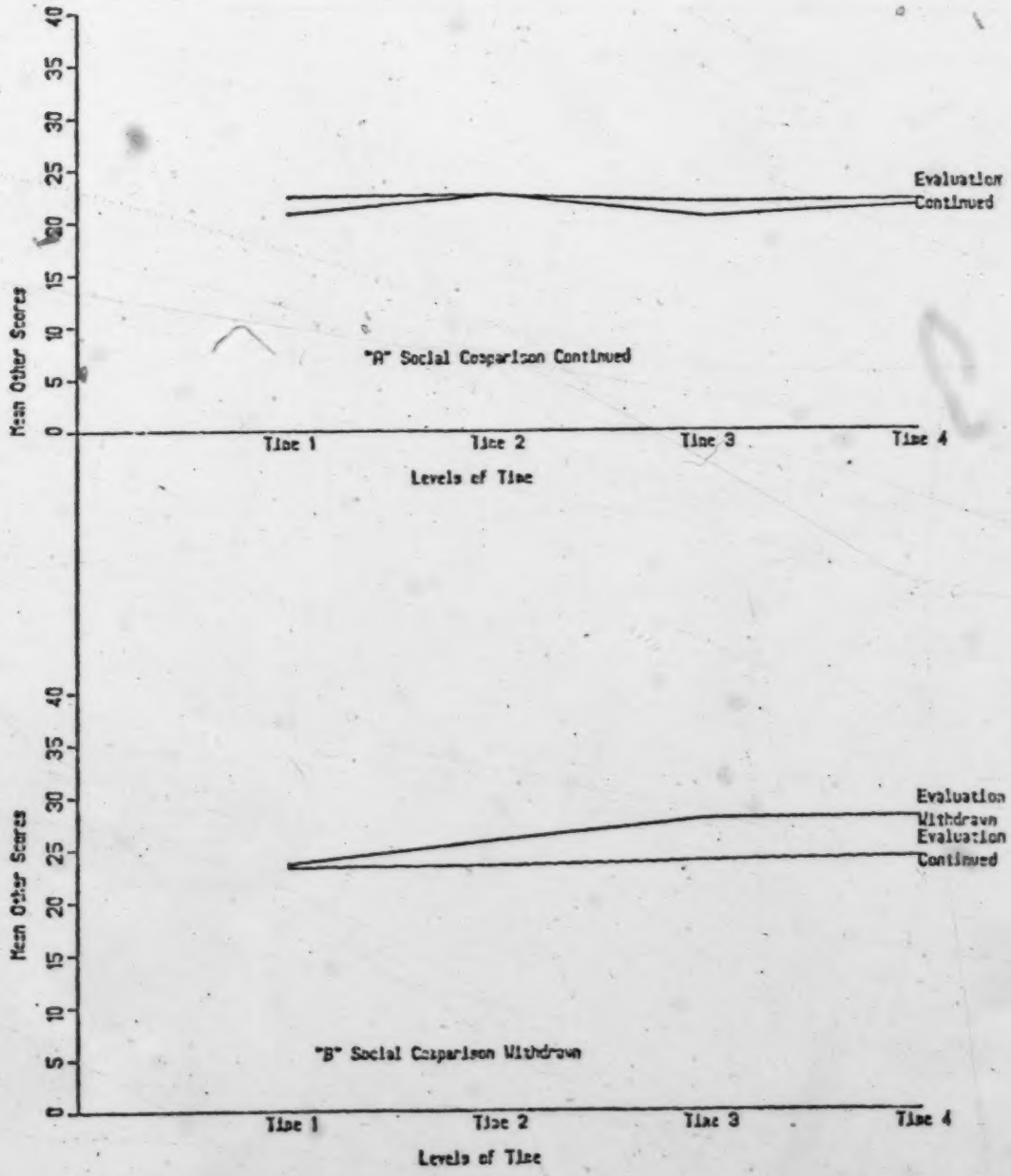
The analysis revealed the two-way interactions of social comparison with evaluation, social comparison with time and evaluation with time were non-significant for the high and low expectancy subjects.

Effects of Time, Social Comparison and Evaluation on Other Scores

The interaction of evaluation, social comparison and time is shown for other scores in Figure 6. The significant interaction for high expectancy subjects, $F(3,108) = 2.721$, $p < .048$, indicates that evaluation interacts with time differently, depending on social comparison. Figure 6a indicates that when social comparison is continued, evaluation does not interact with time. Again the effects of time are basically the same for each level of evaluation. But, as in the three-way interaction on self scores, when social comparison is withdrawn evaluation *does* interact with time. When evaluation is withdrawn self scores show a considerable reduction over trial blocks in comparison to when evaluation is continued. This trend, also shown in previous analyses, is clearly linear with the last trial block showing the largest reduction in predictions for other (see Figure 6b). In relation to the predictions for other by the low expectancy subjects, there was no significant interaction of social comparison, time and evaluation. Apparently adding a third variable does not alter the relationship between any two of the above variables for the low expectancy subjects. Therefore, evaluation does not interact with time when social comparison is either continued or withdrawn for the low expectancy subjects.

Figure 6

Interaction of Time with Social Comparison and Evaluation on Other Scores
High Expectancy



CHAPTER IV

DISCUSSION

Maintenance and Change in Expectancy

The present experiment demonstrates several effects of feedback on expectations. In accord with Berger *et al.*, (1966, 1974), subjects established performance expectations in line with evaluations received over a series of performances. However, in contrast to the view that expectations are self maintaining once they are formed (Berger *et al.*, 1969; Conner and Fisek, 1974), the results show that the presence of either social comparison or evaluation feedback is a necessary condition to maintain expectancy. The simultaneous withdrawal of both variables was sufficient to create change in the prior established expectancy level in this experiment.

It appears that when evaluation and social comparison feedback are simultaneously withdrawn from persons who have previously held high expectations or have confidence in their ability at a specific task, a decline in their expectancy occurs. On the other hand, persons with previously low expectations appear to experience an increase in expectancy when both social comparison and evaluation feedback are withdrawn. These results are in agreement with Festinger's (1954) social comparison theory and Heider's (1944) balance theory and are largely attributed to the separate effects of social comparison and evaluation feedback (Hypotheses 1 and 2). Strong support was also found for Hypothesis 4 with respect to the withdrawal of both social comparison and evaluation, which occasioned the greatest decrease in expectancy. Similarly the simultaneous presence of both variables maintained expectancy at the highest level (Hypothesis 3).

However, the interaction of social comparison and evaluation feedback predicted by Hypothesis 4 was only supported by the high expectancy group.

Subjects in this study did not change their prior expectations when evaluation feedback was withdrawn, provided they continued to receive social comparison feedback in agreement with expectations. The maintenance of expectancy of subjects as found in the Berger *et al.* (1969, 1974) research can be explained in light of these results. As previously discussed in this paper, social comparison cues in the form of disagreement in judgement were present in their experiments.

Recent literature on social learning theory also emphasizes the importance of comparison cues in maintaining expectancy. Similar to the Berger *et al.* (1969) notion of the self-maintaining characteristic of expectancy, is Bandura's (1971) self-reinforcement process. Berger *et al.* (1969:103; 1974:108) argue that, in the absence of objective evaluations of performances, persons will evaluate their performance in line with expectancy. These evaluations, in turn, serve to reinforce the prior expectancy, and render it self maintaining. Bandura (1971:87) also argues that, in the absence of objective evaluations, persons evaluate their own performances. He states:

> . . . people typically set themselves certain standards of behavior and self-administer rewarding or punishing consequences depending on whether their performances fall short of, match or exceed their self prescribed demands.

There are, however, differences between these two self evaluation models which prove significant in the present research. Foschi (1970) reviews the Berger model and suggests that performances are evaluated in line with expectations regardless of whether they, to quote Bandura (1971), ". . . fall short of, match or exceed," the established level of expectancy. The experimental situation becomes almost "foolproof". As Foschi (1970) states, "The expectation structure is thus very well protected when it is the only criterion used to make evaluations" (Foschi, 1970:1). The Bandura (1971) model compares performance with a "standard of behavior", and evaluation is based upon how closely one conforms to the established standard. The "standard of behavior", therefore, does not possess the impenetrable characteristic of the expectation structure. In addition, the Bandura model of self-evaluation requires the existence of a reference point upon which the subject can rely, providing him with a standard by which he can judge his performance. One may clarify

this point by presenting a common-day example of a situation where a standard or referrent is present. If one is familiar with the rules of the game of bowling, one knows that a strike is "good"–the framework is intrinsically established, and a reference point exists which makes it possible for the person to react to his own performance. One's accomplishments would be meaningless without a reference point. Bandura emphasizes the importance of social comparison information as a reference point for self-reinforcement when objective evaluations are absent. He states:

> Most performances do not provide objective feedback of adequacy and consequently, the attainment of other persons must be utilized as the norm against which meaningful self evaluation can be made . . . a self reinforcing event, therefore, often entails social comparison processes.
>
> (Bandura, 1971:87)

As in the Berger research (1966, 1974), the present research employed an experimental task which was purposely ambiguous. In this study subjects were advised that forty was the "highest score" and were made aware of the range of scores possible to achieve. However, because of the ambiguity of the task, i.e., they were unable to determine whether they had performed well or poorly, judgment of their performance was not a valid reference cue. Considering the view set forth by Bandura (1971) it seems reasonable to make the assumption that subjects utilized the social comparison cues for self evaluation or self reinforcement in the condition where social comparison information was continued and evaluations withdrawn. It appears then that, in the absence of objective evaluations, social comparison information in agreement with expectations functions to produce evaluations in line with expectations. These evaluations, in turn, reinforce expectations and serve to maintain them. Bandura (1971:108) describes the process:

> Performance knowledge assumes positive or negative qualities only when evaluated by the performer in relation to his intrinsic standards. In other words, it is not the lights and tones signifying correct responses that are reinforcing; rather they serve as cues for subjects to apply to themselves positive or negative self-evaluations which function as the critical reinforcing events.

The present research assumed that subjects would maintain expectancy when social comparison was present, that the presence of evaluations would strengthen the expectancy,

and that the combination of the two (social comparison and evaluation feedback) would create maximum expectancy. These hypotheses were based on the assumption that the more information one has confirming one's beliefs, the stronger those beliefs would be. No support was found for that assumption, and it is precisely this lack of support which lends further credence to the notion that social comparison information is highly important for the maintenance of expectations in the absence of evaluations. Subjects maintained their expectancy whether they were receiving both evaluation and social comparison cues, evaluation only[4], or social comparison only[5].

Before concluding this section it would seem important to point out an important difference between the Berger research and that described in this study. Concerned with the problem of university students' not meeting the requirements of a naive subject, subjects in this study were purposely chosen from a high school subject pool. The majority of the Berger studies utilize the university subject pool. It is imperative that subjects in this type of experiment view the task situation and the purpose of the study as important and that they take their participation in the study seriously. It was assumed that by establishing a laboratory setting within the school the subjects would be led to perceive the experiment as a test situation which, like other tests that had affected their academic standing, was therefore important as well, and would ensure that they would take their participation seriously. Unlike many university students, high school students are not likely to have been exposed to experiments where cover stories are necessary. The most salient difference in the studies which may contribute to the contrary findings could be the choice of the subject pool and the task setting.

---

[4]It should be noted that in the evaluation-continued conditions, evaluations received were evaluations of self performance only. These subjects maintained the established level of expectancy with feedback regarding self scores only.

[5]This condition is comparable to the Berger *et al.* standard experimental situation (Berger and Snell, 1961). Subjects were provided with information that choices of self and other were in disagreement.

Practical Importance and Application of Findings

The withdrawal of both social comparison and evaluation cues has importance on the practical level when customary social others are not accessible. With respect to widows, retired executives and mothers when their last child leaves home one might assume that these high achievers would have established strong reference points for evaluating their own performances. Yet the behavior of these individuals often suggests a decline in confidence even when there is no objective reason for them to believe their level of ability has decreased. Previous research considering changes in the behavior of persons when they retire, are widowed, or alone (e.g. Riley and Foner, 1968) has not considered the possibility that the withdrawal of normal bases of social comparison and evaluation feedback may have a deteriorating effect on individual's beliefs about their ability and in turn their self confidence or self image. Consideration of the factors contributing to changes in confidence with respect to future research on the aging and retired may prove an important contribution of this study.

I believe, however, that the lack of confidence displayed by an individual may not be related to ability.[6] A similar observation was made by Meyer (1970) in his study which compared low expectancy persons with persons of high expectancy. Meyer suggests that the mere fact of participating in a study with someone of high ability may in itself serve to lower the expectations of the low achiever, independent of his ability. The point is that a decrease in level of expectancy (beliefs about one's ability) does not necessarily mean a decrease in level of actual ability. The practical effects, however, as Meyer notes may be "debilitating" (see Entwistle and Weber Jr., 1973:124).

In the normal social situations discussed above, high achievers behaved as if they had experienced a decline in expectancy (beliefs about their ability). The decrease in expectancy personally affected them by lowering their productiveness and feelings of usefulness even

[6] A consequence of lack of confidence, of course, is that it perhaps may subsequently affect ability in a negative manner.

though their ability and previously acquired skills probably remained unchanged. Entwistle and Weber Jr. (1973) suggest that children as well are affected by this process. They propose that regardless of the child's ability, if his personal level of expectations is high, the greater the probability that the child will go to college.[7] One can obviously deduce from this proposition the importance of increasing the low and maintaining the high personal expectations of children and adults alike. Persons with high expectations for self are more likely to enjoy their full potential of opportunities.

In this study self expectations of the low performer were increased when an individual was paired with a subject of higher ability, and presented with feedback on a series of performances which was subsequently withdrawn.

These results suggest a direction for raising expectancy which is both practical and attractive in its simplicity.

Patterned after the present experiment, one way of creating an increase in expectancy may be to pair a child with another of slightly more ability, provide performance feedback and then eliminate the feedback. The procedure would then be repeated varying the situation by providing progressively more challenging partners. The condition "slightly more ability" is an important consideration. If an individual were paired with another whose ability was extremely at variance with his own it is unlikely in a naturalistic situation that he would relate to the other; rather, it is probable that he would view the situation as an overwhelming one.

In the suggested situation, information concerning their own and their partner's performances would be withdrawn from the low achiever. The high achiever, however, would receive continuous self evaluation feedback.[8] The method of measuring expectations

---

[7]The potential application of course is not restricted to children, but is being used here as an illustration.

[8]Hopefully these evaluations would not be at variance with previous evaluations received by this individual; however, we are thinking in terms of a realistic task situation and should a high achiever's performance deteriorate (for whatever reason) the procedure would be reversed for this individual.

used in the present study (predictions for future performances) could also be utilized in the proposed situation. Although the present study employed a physical set-up which placed students in pairs, the circumstances could be modified to a group situation.

Several researchers (e.g. Crandall *et al.*) have demonstrated the positive effect on low expectancy children of withdrawing negative evaluations. There is, however, little research to demonstrate the effect of the withdrawal of feedback on the performance of one's peers. It may not be the withdrawal of feedback on personal performances per se but rather the key may lie in the absence of social comparison information when evaluations are also absent. Results of this study show that the withdrawal of either social comparison or evaluation feedback is *sufficient condition* to change expectancy, however, it is possible that since the subjects received social comparison information during the first stage of the study when expectations were being established, the comparison with their partner became more significant than would otherwise be expected. Subjects in the Crandall *et al.* study did not participate in the study with a partner, hence, the social comparison information, present or absent, may not have been an important factor.

An alternate explanation of the Crandall *et al.* results may be provided in terms of our theoretical considerations. Subjects in their study may have interpreted the absence or withdrawal of evaluations as agreement information. Since they were not participating with a partner the agreement would be equivalent to a satisfactory score. This implies subjects made an assumption that evaluation feedback was for the purpose of pointing out unsatisfactory performance in terms of a standard and since there was no feedback the subjects assumed their performance was satisfactory. This agreement assumption would cause the low achiever's cognitive state to be unbalanced which would, in turn, result in an increase in level of expectancy. With this explanation, the belief that their performance was in agreement with some standard of proficiency was in opposition to their prior belief that their performance would be in disagreement with the standard or that it would not be equivalent to the standard.

With respect to maintaining or reinstating prior expectancy of the adult high achiever the educational systems which focus on "retraining" may not be using the most practical method of providing individuals with self evaluation cues which will enable them to retrieve their prior high expectancy state. An alternate solution could lie in establishing interaction sessions, similar to the above suggestion for school children, with some modification. Individuals would be provided with either social comparison cues or evaluation information. Persons who have been institutionalized for extended periods are often required to participate in "Life Skills Training" in order to assist them to function successfully in the community. The suggested interaction session would provide individuals with what might be called "self evaluation skills". Organizations may also profit from providing such interaction sessions for their employees utilizing relevant modifications. The results of this study suggest that when social comparison information is not available individuals are highly sensitive to the withdrawal of evaluations,[9] even when they have been given a reason for not receiving evaluation feedback as in this study.

The low achievers in the present study showed a strong increase in expectations coinciding with the withdrawal of negative evaluation feedback. Whereas some findings (e.g., Cohen *et al.*, 1970; Katz and Benjamin, 1960; Katz *et al.*, 1958) suggest that it would be difficult to convince persons of low status that the possibility was indeed attainable, this was not the case with the low expectancy subjects in this study. Although this experiment did not test competence, the knowledge that an increase in expectancy functions to increase performance would lead us to expect that these subjects would perform at a higher level as well.

The results of this study suggest that the high achiever (high expectancy subject) continually requires a reward for his/her performance. Social Psychology literature has concentrated upon raising the expectancy of the low achiever (Entwistle and Weber Jr., 1972;

---

[9]See Crandall, Good, and Crandall (1964) for a discussion of the effects of adult "nonreactions" on children's expectations.

Cohen *et al.*, 1970), while neglecting the maintenance of expectancy of the high achiever. Obviously the need may be equally important.

Comparison of High and Low Expectancy Effects

It is interesting to find that the amount of increase in expectancy by the low subjects was not of as great a magnitude as the amount of decrease by the high expectancy subjects. This result, predicted in Hypothesis 5, is in agreement with findings by Moore (1968). We believe that the difference between these two levels of expectancy may be due to an interaction between the low expectancy subjects' increase in confidence and their fear of embarrassment. However, whether such demonstrated differential effects on highs and lows can be accounted for in terms of Moore's (1968) "face saving", Rosenberg's (1965) "evaluation apprehension"[10] or in terms of "fear of embarrassment" is an unanswered question. It does, however, seem reasonable to suspect that the low expectancy subjects' behavior may be indicative of some degree of anxiety which may be described by any one of the above theoretical constructs.

It seems plausible that when evaluations were withdrawn from the low expectancy subjects they may have been apprehensive about predicting too high when they had received no objective indication that their ability had improved. Therefore, they tempered their predictions due to this anxiety.

When positive evaluations are withdrawn from the high expectancy group there is no such problem. If they perform better than their predictions they are not likely to think that E will evaluate them negatively since one is customarily smiled upon for modest estimates. The anxiety experienced by the low expectancy subjects (for whatever reason) may mediate between their confidence and their predictions. This suggests that when low expectancy subjects are open to public assessment their predictions may not represent an accur-

---

[10]Evaluation apprehension is viewed as an "active, anxiety-toned concern that he win a positive evaluation from the experimenter, or at least that he provide no grounds for a negative one" (Rosenberg, 1965:29).

ate measure of their level of expectancy.

The suggestion that "experimenter effects" may have been operating for the low expectancy subjects is not a new one. In his study concerning the effects of social status on expectancy, Moore (1969) notes, "The experimenter thus appears to have become a significant aspect of the interaction for the low status subjects" (see Moore, 1969:56 for a discussion of this problem). The results of this study, therefore, further emphasize Moore's (1969) view that a different description is required for the behavior of low and high expectancy subjects. He states: ". . . it is now clear that an adequate description of the behavior of a low status actor must include a cost or face-saving parameter" (p. 43).

Process of Expectancy Change

As noted earlier, no specific hypotheses concerning the process of expectancy change were set forth. The repeated measure analyses, presented in Section 1 of Chapter III, was therefore exploratory in nature.

The most interesting findings of the time analyses are the interactions of time with the other variables (social comparison and evaluation). The effects of evaluation increase with time for the high expectancy subjects but not for the low expectancy subjects. Thus, withdrawal of evaluation immediately alters expectancy for the low group but continues as a gradual process with the highs. The process is very similar with respect to the withdrawal of social comparison feedback.

When both social comparison and evaluation feedback are withdrawn, the change in expectancy over time is much more dramatic for the highs than the lows. Again we see the change being more immediate for the lows as opposed to gradual for the highs; however, it is also accelerated over time for the highs. During time blocks three and four the high expectancy subjects indicated a reversal in expectations (from high to low) when both evaluations and social comparison feedback were withdrawn. This finding most clearly demonstrates the effect observed in the naturalistic situation described in Chapter I of this paper, and provided the strongest support for our main hypothesis.

Changes in Beliefs About Self and Other

The components of expectancy as measured in this study are the predictions which the subjects made for themselves and for their partners. As discussed in Chapter I, the changes in expectancy predicted from Festinger's (1954) social comparison theory focused on changes in self scores and did not address the issue of beliefs about other.

The present study was based on Festinger's theory that individuals require an accurate assessment of their ability and that individuals will assess their ability by comparing their performances with others' performances when objective evaluation is withdrawn. In this research the theory was extended to include social comparison cues (i.e., disagreement information). Following this extension the assumption was made that when social comparison and evaluation information were both withdrawn subjects would change their beliefs about their ability in order to bring them more in line with beliefs about the ability of social others.

The analyses of self scores provides the strongest support for our theoretical considerations with respect to social comparison theory. As predicted when social comparison and evaluation feedback were simultaneously withdrawn, both high and low expectancy subjects changed their level of expectancy for self. Self expectancy increased for low subjects and decreased for high subjects. That is, both groups brought their level of expectancy for self closer to their prior level of expectancy for other.

As expected, the changes in predictions for self for the most part paralleled changes in the difference scores. The decline in self scores increased over the four time periods for the high expectancy subjects whereas the effect was more one of an immediate change for the low expectancy group with no increase over time. It is of particular significance that the high expectancy subjects in this experiment *reversed* their self expectation state when both social comparison and evaluation information were withdrawn. These subjects changed from a high self–low other state to a low self–high other state. The low expectancy group did not show the same dramatic change as the high expectancy group but the direction of

change was as predicted.

It is interesting to note that Crandall *et al.* (1964) also found a difference between the high and low self expectancy subjects. These authors suggest that the withdrawal of feedback following positive evaluation acts as negative reinforcement and similarly the withdrawal of feedback following negative evaluations acts as positive reinforcement. They account for the difference between highs and lows in terms of a difference in reinforcement strength. Their results show that negative reinforcement following positive reinforcement is more powerful than positive reinforcement following negative reinforcement.[11] They are, however, careful to point out that they are not attempting "to imply that the data of this and the previous study are presented as evidence of the superiority of 'negative' vs. 'positive' reinforcement in any theoretical sense" (p. 496).

It may be that we are able to predict changes in self evalutions equally well from either the reinforcement or the social comparison perspective, but changes in evaluations for other are not as easily explained in these terms.

In contradiction to our earlier assumptions concerning beliefs about other remaining stable when social comparison and evaluation information are withdrawn, there were also changes in the subjects' predictions for their partners: high expectancy subjects increased and low expectancy subjects decreased their predictions for other.

It appears that at the same time the individual moves expectancy for self closer to prior expectancy for other he also moves expectancy for other closer to prior expectancy for self. The end result is a convergence of predictions for self and other (Moore, 1968). The change in self scores in this experiment, however, were more pronounced for both groups than the changes in other scores, and the high expectancy subjects indicated less change for other in relation to changes for self than the low expectancy group. This point is clearly

---

[11]See page 8, Chapter IV for a discussion of the Crandall Study. It is of interest to note that these researchers ruled out "extinction" as an explanation of their findings since their control group did not behave in accordance with their treatment groups.

demonstrated in the analyses: when social comparison information was withdrawn the high expectancy subjects changed their predictions for self but did not alter their predictions for other. When both social comparison and evaluation information were withdrawn the change in other scores shown by the highs was therefore mostly contributed by the effect of the withdrawal of evaluations. No explanation is provided in the data for the difference noted between the high and low expectancy subjects' beliefs about other.

The analyses of self and other scores as separate components may be a misleading one since expectancy is a relative state in which one's expectations are always in relation to other.

SUMMARY

In summary, the present research found that one's level of expectations influences the way he/she evaluates performances of both self and other when objective evaluations and social comparison information are withdrawn. Those who have high expectations may have more confidence in their ability, but ironically their prior confidence in their ability may be the very attribute that facilitates a decline in confidence when social comparison and evaluation cues are not available. In a similar situation low confidence in one's ability appears to facilitate an increase in expectancy.

The results of this study showed that maintenance and change in expectancy vary as a function of the continuation or withdrawal of social comparison and evaluation cues. More specifically the findings indicate that:

1. Expectations are maintained if persons are in possession of either social comparison cues, evaluation cues, or both, in agreement with prior expectations.

2. Expectations are changed when both social comparison and evaluation cues are withdrawn.

3. When individuals change their expectations as a result of the simultaneous with-

drawal of both social comparison and evaluation feedback, they bring them closer to beliefs they hold about social other(s), with high expectation persons decreasing their expectancy and low expectancy persons increasing theirs.

All of the hypotheses were supported by the data; the majority of the hypotheses received strong support. It will be remembered that the theoretical framework employed to derive the hypotheses concerning social comparison and evaluation information were developed, with some extensions, from research by Berger and associates (1966:1974) with respect to expectation states theory, Festinger's (1954) social comparison theory, and Heider's (1944) balance theory. The phenomenon that confidence deterioriates when feedback is withdrawn was, however, first illuminated for the researcher by observations of naturalistic situations, discussed in Chapter I.

In contradiction with research by Berger and associates that expectations are self maintaining, the results of this study strongly support the assumption that: *when both evaluation and social comparison information concerning a person's performances is withdrawn individuals will change their beliefs about their ability to bring them closer to beliefs they hold about the ability of other(s).*

The hypothesis concerning the difference between high and low expectancy subjects was based solely on previous research (e.g. Moore, 1968; Lewis, 1966), with no theoretical framework. As noted earlier, although the data suggested that the low expectancy subjects may have experienced some degree of anxiety, which could account for the difference, there was no unequivocal way of ascertaining this. A more definitive answer to this question will necessitate further research.

CHAPTER V

SUGGESTIONS FOR FUTURE RESEARCH

The present research could serve as a catalyst for future research in a variety of directions. For example:

1. *Methodological Extensions:* A replication of the present study with methodological changes, e.g. (a) more trials for the simultaneous withdrawal of social comparison and evaluation of feedback condition in order to further investigate the stability of the change in expectancy by the low group, and (b) have subjects indicate their choice of answer directly on the choice forms and file rather than on the bingo type form. This would serve to eliminate some of the experimenter effect if any were present, or (c) remove experimenter from the room to completely eliminate experimenter effect. This would involve using some other form of feedback (i.e. flashing lights).

2. *Attribution Theory Investigation:* Some data were gathered in this study with respect to subjects' attributions of task difficulty, luck, etc., (see Appendix H, question 5). An analysis of this data within a theoretical framework of attribution theory could be undertaken.

A change in expectancy implies no change in attribution to ability, that is, one attributes his high score to having ability and his low score to the lack of ability. However, it is not so clear that one similarly attributes unknown scores to either ability or lack of it, despite the fact that there is apparently a decline or increase in expectancy. It would be of interest to examine the attributions of subjects when both social comparison and evaluation cues are withdrawn.

3. *Theoretical Extensions:* The research presented here was concerned with ability at a specific task or specific performance expectations. Future studies could examine the effect of the simultaneous withdrawal of social comparison and evaluation cues on general expectations. As in the Crandall *et al.* (1964) study, a measure of general expectations, or self concept, could be taken prior to subjects being assigned to the experimental conditions, or subjects could be assigned on the basis of prior status as in the Moore (1968) study.

Prior to considering the investigation of extensions to the present research further research is needed to test the results found in this study as it is of course possible that some other variables may have contributed to the results. The theoretical considerations of this study were not formally developed, however there is sufficient information to formulate propositions that could be tested in different situations. The development of these extensions or additions for integration into either the expectation states theory of Berger and associates, Festinger's social comparison theory or a new theory is beyond the scope of this paper. This researcher would hope to pursue this area of investigation in the future.

Finally, it is hoped that this research may provide a direction for future studies concerning changes in individuals' beliefs about themselves and others. Changes in the structure of the family unit (e.g., when children leave home, a husband or wife dies, retires, is admitted to hospital or enters a senior citizens' residence) may be an important factor contributing to changes in a person's self concept, and in his/her concept of others as well.

SELECTED BIBLIOGRAPHY

Bandura, Albert. Self reinforcement processes. *In: The nature of reinforcement* (R. Glaser, ed.). Academic Press, Inc., 1971.

Bandura, Albert, & Adams, Nancy E. Analysis of self-efficacy theory of behavioral change. *Cognitive Theory and Research, 1*(4), 1977, pp. 287–310.

Bandura, Albert. *Social learning theory.* Englewood Cliffs, N.J.: Prentice Hall, Inc., 1977.

Berger, J., Cohen, B. P., Conner, T. L. & Selditch, M. Jr. Status characteriistics and expectation states: a process model. *In: Sociological theories in progress I* (J. Berger, M. Zelditch, Jr. and B. Anderson, editors). Boston: Houghton Mifflin Co., 1966, pp. 47–73.

Berger, J., & Conner, T. L. Performance expectations and behavior in small groups. *Acta Sociologica, 12.*

Berger, J., Conner, T. L., & Fisek, M. H. (editors). *Expectation states theory: a theoretical research program.* Cambridge, Mass.: Winthrop Publishing Inc., 1974.

Berger, J., Conner, T. L., & McKeown, W. L. Evaluations and the formation and maintenance of performance expectations. *Human Relations, 22,* pp. 481–502.

Berger, J. and Snell, J. L. A stochastic theory for self–other expectations (Technical Report No. 1). California: Stanford University, Laboratory of Social Research, 1961.

Bilodeau, Edward A., Bilodeau, Ina Mcd., & Schumsky, Donald A. Some effects of introducing and withdrawing knowledge of results early and late in practice. *Journal of Experimental Psychology, 58*(2), 1959.

Cohen, E. G., Lohmann, M., Hall, K., Lucero, D. & Roper, S. Expectation training: altering the effects of racial status characteristic (Technical Report No. 2). California: Stanford University, School of Education, 1970.

Cohen, Elizabeth G. Interracial interaction disability. *Human Relations, 1,* 1972, pp. 9–24.

Crandall, Virginia C., Good, Suzanne, & Crandall, Vaughn J. Reinforcement effects of adult reactions and nonreactions on children's achievement expectations; a replication study. *Child Development, 35,* 1964, pp. 485–497.

Deutsch, Morton, & Krauss, Robert M. *Theories in social psychology.* New York: Basic Books, Inc., 1965.

Entwistle, Doris R., & Webster, Murray, Jr. Raising children's performance expectations: a classroom demonstration. *Social Science Research, I,* pp. 147–158.

Entwistle, Doris R., & Webster, Murray, Jr. Research notes: status factors in expectation raising. *Sociology of Education, 46* (Winter), 1973, pp. 115–126.

Evans, J. L. Affect and the attribution of causality. Unpublished M.A. Thesis, University of Alberta, 1968.

Ferguson, George A. *Statistical analysis in psychology and education.* McGraw Hill Inc., 1976.

Festinger, Leon. A theory of social comparison processes. *Human Relations, 7,* 1954, pp. 117–140.

Foschi, M., Contradiction of specific performance expectations: an experimental study (unpublished PhD dissertation). California: Stanford University, 1970.

Foschi, M. Contradiction and change of performance expectations. *Canadian Review of Sociology and Anthropology, 8,* 1971, pp. 205–222.

Freese, L., The generalization of specific performance expectations. *Sociometry, 39,* 1976, pp. 194–200.

Goetz, M. Lothar. Contradiction to expectations: chance vs. skill: an experimental study (unpublished M.A. thesis). University of British Columbia, 1975.

Harvey, O. J. An experimental approach to the study of status relations in informal groups. *American Sociological Review, 18,* 1953, pp. 357–367.

Heider, F. Social perception and phenomenal causality. *Psychological Review, 51,* 1944, pp. 358–374.

Heider, F. *The psychology of interpersonal relations.* New York: John Wiley and Sons, 1958.

Katz, I., & Benjamin, L. Effects of white authoritarianism in biracial work groups. *Journal of Abnormal Social Psychology, 61,* 1960, pp. 448–456.

Katz, I., Goldston, J., & Benjamin, L. Behavior and productivity in biracial work groups. *Human Relations, 11,* 1958, pp. 123–141.

Keisler, Charles, A. *The psychology of commitment.* New York: Academic Press Inc., 1971.

Lewis, G. H. Performances, evaluations and expectations: an experimental study (unpublished PhD dissertation). California: Stanford University, 1966.

Lindsay, G., & Aronson, E. (editors). *The handbook of social psychology.* Second edition, Volume II. Reading, Mass.: Addison Wesley Publishing Co., 1968.

Maddi, Salvatore R. *Personality theories: a comparative analysis.* Homewood, Illinois: The Dorsey Press, 1972.

Meyer, W., & Seidman, S. Age differences in the effectiveness of different reinforcement combinations on the acquisition and extinction of a simple concept learning problem. *Child Development, 31,* 1960, pp. 419–429.

Meyer, W. J., & Seidman, S. Relative effectiveness of different reinforcement combinations on concept learning of children at two developmental levels. *Child Development, 32,* 1961, pp. 117–127.

Meyer, W. J., & Thompson, G. Sex differences in the distribution of teacher approval and disapproval among sixth grade children. *Journal of Educational Psychology, 47,* pp. 385–396.

Moore, J. C. Jr. Status influence in small group interactions. *Sociometry, 31,* 1968, pp. 47–63.

Moore, J. C. Jr. Social status and social influence: process considerations. *Sociometry, 32,* 1969, pp. 145–158.

Riley, Matilda W., & Foner, Anne. *Aging and society.* New York: Russell Sage, 1968.

Rossenberg, M. J. When dissonance fails: on eliminating evaluation apprehension from attitude measurement. *Journal of Personality and Social Psychology, I,* 1965, pp. 28–42.

Rotter, J. *Social learning and clinical psychology.* Prentice Hall, 1954.

Rotter, J. Generalized expectations for internal vs. external control of reinforcement. *Psychological Monograph, 80,* 1966, Whole No. 609.

Sherif, M., White, B. J., & Harvey, O. J. Status in experimentally produced groups. *American Journal of Sociology, 60,* 1955, pp. 370–379.

Walster, E., Berscheid, E., & Walster, G. W. New directions in equity research. *Journal of Personality and Social Psychology, 25,* 1973, pp. 151–176.

Webster, M. Jr. Source of evaluations and expectations for performances. *Sociometry, 32,* 1969, pp. 213–258.

Whyte, William F. Corner boys: a study of clique behavior. *American Journal of Sociology, 46,* 1941, pp. 647–664.

Whyte, William F. *Street corner society: the social structure of an Italian slum.* University of Chicago Press, 1943.

APPENDIX A

DISCUSSION OF EXPERIMENTAL TASK

Several task situations used in earlier expectation research (Berger and Snell, 1961; Lewis, 1966; Foschi, 1970) were considered prior to the selection of an experimental task developed by Goetz (1974). Although it is desirable to use a standardized task from the point of view of comparison of studies the important requirement of an experimental task situation is that it meet the specific need of the particular study. The Berger and Snell (1961) task situation discussed earlier did not meet the requirements of this study for the following reasons: (1) it included continuous disagreement, or social comparison feedback, whereas this study required a condition in which Ss received no social comparison feedback; (2) it only allowed for a right or wrong answer–since this study was concerned with changes in the strength of expectations, rather than changes only in state, graded scores were required.

The Lewis (1966) and Foschi (1970) task situation was also rejected. Expectations in their studies "are characterized as predictions" (Foschi, p. 10), and both researchers utilized data processing cards for the task. Subjects were required to "match to sample" and their scores depended on how close the punches in the chosen card matched the sample, e.g., perfect match = 30, no match = 0 (graded scores). Although their predictions measure of expectations was adopted for this study, the data processing card task was not incorporated because of evidence that students tended to view the task as both difficult and tedious.

The Goetz (1974) task adopted for this study consisted of colored post cards on which two objects, i.e., a boat and a house, were joined together by a straight line. The subjects' task was to estimate, as accurately as possible, the distance between the two joined objects of points. A list of distance estimates was written on the reverse side of each post card. For example, on the back of a particular card Ss would see the following:

D = 200 feet
C = 190 feet
B = 210 feet
E = 185 feet
A = 215 feet

On each trial subjects were required to choose one of the distances marked on the back of the card. The test consisted of forty cards. the rationale for the ordering of the letters from A to E is discussed by Goetz (1974).

> One of our concerns was the subjects' estimation strategy. We felt that in cases where subjects were very uncertain about their estimates, they may employ a strategy to minimize their losses. If subjects selected the most accurate estimate they received a score of 40; however, if the least accurate estimate was chosen they received a score of 0. Given that subjects may be somewhat unsure of their estimates, it would have been possible to avoid receiving very low scores simply by always selecting the middle distance. In an attempt to minimize this possibility the ordering of the letters and of the distances was randomized. (Appendix A, p. 2)

This task could conceivably be problematic because of the possibility of variability between trials; however, since all the Ss received the same order of stimulus presentations this was not of great concern. The decision to use the Goetz task and system of scoring then, was based on the belief that although there may be some problems, they were less bothersome than those presented by the other task situations previously used.

On a given trial, after viewing the post card and selecting one of the five estimated distances, Ss indicated their choice by placing the marker on the corresponding square. They were then handed a choice form by E which indicated their own choice and that of their partner (disagreement manipulation). The experimenter always listed the S choice as the subject had indicated it but made sure the 0 choice was in disagreement, except for a few agreement trials that were inserted to avoid suspicion. After checking that their own choice had been recorded correctly and noting the choice of their partner the Ss filed their choice form in the answer box. Ss were then verbally informed of their scores. For example, on trial 1 person number 1 scores 40 and person number 2 scores 20. The high expectancy S was provided with a high score and the low expectancy S with a low score. The scores given to Ss for trials 1 to 20 served to create the initial expectations. After learning of their scores, the Ss wrote them on the score form for the particular trial and filed the form in the answer box with the choice form. The S was then asked to write on the prediction form the score they expected to receive and the score they expected their partner to receive for each

subsequent trial. When Ss made their prediction for each trial they filed this in the prediction box which was located on the table in front of them. This completed the procedures required for one trial. On completion of one trial Ss were immediately shown the post card for the subsequent trial. There were 20 trials for the pre-experimental stage and 20 for the experimental stage.

APPENDIX B

INTRODUCTION TO THE STUDY

This study concerns how well individuals can estimate distances. Recent research suggests that some people are able to intuitively perceive distances and to perceive distant objects in their proper perspective where other people do not seem to have this ability to the same extent.

Distance estimation ability seems to be a fundamental and basic ability but research on it has just started and frankly, at this time, the reasons why some people have this ability, *or more of it than others,* are not known. One of the interesting things *we do know* is that this ability appears to be very specific and is not related to specialized skills the individual might possess, such as mathematical, verbal or visual skills. Nor is it necessarily related to such things as grades in school or even, for that matter, to IQ. Nevertheless distance estimation ability can be extremely important as it can potentially be utilized in almost every type of activity, particularly in sports activities, like tennis and football.

This study involves how accurately individuals can perceive their own distance estimation ability and this ability in others.

You will participate in the study with another high school student and an *important requirement* is that you *do not speak aloud* in the experimental room. That is, do not speak to each other or to the experimenter once you are seated in the experimental room.

APPENDIX C

POST INTRODUCTION TO STUDY QUESTIONNAIRE

Before we actually go ahead with the experimental test, I'd like you to answer the following questions. Please answer as accurately as you can using the information from the Introduction to the Study which you have just read.

1. What ability are we studying?

2. What is the relationship between the ability we are studying and other abilities like mathematical, verbal or visual skills?

3. It is possible to have different amounts of this ability?

   Yes_____ No_____ (Mark X to indicate)

APPENDIX D

INSTRUCTIONS TO SUBJECTS FOR ALL CONDITIONS

Hello, my name is _____ and this is my assistant _____. You have both read the Introduction to Our Study. To make sure you understand the introduction, before we begin the experimental test, will you please answer the three questions on this form (see Appendix "A" attached). (Give subjects form.) Just write your answers in the space provided. Remember, you are not to speak aloud. (Wait while subjects complete form.)

Now, I think we can get underway. First of all I am going to describe the test I will be administering. In order to make sure all of the students in the study receive exactly the same instructions I will read them.

First, you will be shown a post card like this one and given 10 seconds to study the distance between the two objects joined together by a straight line. (Show them.) When the ten seconds are up I will say "Turn your card over."

Now, on the back of the card (show back of card) there are five distances, labelled A, B, C, D and E. One of these distances is the correct distance between the two objects marked on the front of the card. You will have ten seconds to choose the correct one. When the ten seconds are up I will say, "Indicate your choice."

Now, suppose you have both chosen distance "A", you will indicate your choice by placing a marker (indicate marker) on square "A" of the choice card. (Show them.)

I will then check your choices (look at both choices and record them on a choice form--make a separate one for each subject). On this form (show form) I have recorded your choices. I then hand you the form (give subjects the form). You will check to make sure I have recorded your choice correctly, and it is also important that you notice what choice the other person has made. In this instance you know the other person's choice is the same as your own but in the actual test this is how you will be informed of your partner's choice. When you have checked the choice form, file it *face down* in the Answer Box. (Show box.) Put your forms in that box now.

When you have checked the choice form _____ will calculate your scores by checking with the answer key and she will read aloud the score each of you has received. The possible scores you can get are 40, 30, 20, 10 and 0. If you have chosen the correct distance your score will be 40, the next closest to being correct 30 and so on. Therefore, if you have chosen the distance furthest from being correct your score will be 0. For convenience I will call you (look at one subject) Person One, and you (look at the other subject (Person Two). Now, suppose in this instance, distance "A" is the correct distance. _____ will announce--"On post card No. 1 person one received score 40, and person two received score 40." Please enter

these scores on this score form (show form). Now, file the form *face down* on top of the choice form in the Answer Box. (Assist subjects if they require assistance.) Good.

Now, as you will remember we are interested in how well you can estimate your own ability and that of others. Once you have placed your score forms in the answer box I will ask each of you to fill out these forms (show them) on which you will indicate your predictions for the next post card. These forms ask what score you expect to get on the next post card and what score you expect the other person to get, on the basis of the scores each of you has obtained during the total number of previous post cards you have estimated distances on. This is the only way we can discover the extent to which you can recognise your ability. It is important for our study that you try to be as accurate as possible in making these predictions. Try to estimate how well you actually think you will do, not what you hope to do or what you think we expect you to do but how well you really think you will do. After you have completed these prediction forms place them *face down* in the Prediction Box. (Show them.) This completes the procedure for one post card or one trial. When the prediction forms have been filed we will proceed to the next post card and begin the procedure for trial 2.

This procedure will be followed for the first 20 trials. There are forty trials in all. After trial 20 we will stop for a moment to check the time and this will give you a slight break.

During the actual test you will both be shown the same post cards. Since we only have one copy of each card one person will be given the card until he or she has made a choice and then the card will be given to the other person. On the odd numbered cards person number one will be shown the card first and on the even numbered cards person number two will be given the card first.

It is important for our study that you try to be as accurate as possible, both in estimating the distances and in making your predictions. The task may appear very difficult at first, although some people seem to find it easy. In any case don't be fooled by this, and do not be concerned. We have found that Distance Estimation Ability is *often not a conscious ability*. Many students have told us they were simply guessing but the research indicates that even when they thought they were guessing they were probably perceiving very subtle cues which enabled them to judge quite accurately most of the time. So, don't worry about any uncertainty you may have. Concentrate hard, but follow your natural impulse. One thing about this test is that the distance on each card requires the same degree of ability to estimate. That is, no one post card has a distance more difficult to estimate than another thus the task *does not get more difficult* as it goes along.

Now, before we begin the test we are going to have two practice trials to make sure you understand the procedure. Since these trials are to practice the procedure rather than to practice estimating distances you will both choose distance "B" for each post card and you will proceed as if each of you had actually made this choice. We will now begin the practice trials.

APPENDIX E

POST TASK DESCRIPTION AND PRACTICE TRIALS QUESTIONNAIRE

Scales "A" and "B"

Directions:

Please answer the following questions as accurately and honestly as you can.

(place an X in the blank space above the word that best describes how you feel. The center blank should be used only when the words at both ends describe how you feel equally well.)

"A" 1. How do you feel about your skill at distance estimation?

Very	Quite SKILLED	Slightly	Equal	Slightly	Quite UNSKILLED	Very
____	____	____	____	____	____	____

"B" 2. How important to you is doing well at this task?

Very	Quite IMPORTANT	Slightly	Equal	Slightly	Quite UNIMPORTANT	Very
____	____	____	____	____	____	____

APPENDIX F

POST TRIAL TWENTY QUESTIONS

Scales "C" and "D"

Directions:

Please answer the following questions as accurately and honestly as you can.

(For question 1 place an X in the blank space above the work that best describes how you felt. The center blank should be used only when the words at both ends describe how you felt equally well. For question 2 underline the word that indicates how you feel.)

"C" 1. On trials one to twenty how certain were you that the answers you chose were correct?

Very	Quite	Slightly		Equal		Slightly	Quite	Very
	CERTAIN						UNCERTAIN	

"D" 2. During trials one to twenty how would you describe your confidence in your answers? (underline)

Decreased | Remained the same | Increased

APPENDIX G

INSTRUCTIONS TO TREATMENT GROUPS

The following scenarios were presented to Ss in the four treatment groups:

Group 1 (where evaluation and social comparison information were both continued).

We will continue to write down your individual answers on the choice form and have you check them as before. Remember to notice whether your partner's choice is in agreement with your own as this also serves as a check. However, in order to save time Mrs. _____ _____ and I will each calculate the score for one of you and we will write your score directly on your score forms. They will be given to you to note your score and you will file the score form in the answer box as usual. Hopefully this will enable us to finish earlier. We will enter the other person's score later from the score he/she has recorded on the other form. If you want to know the score of your partner and have time after the experiment you could wait and we will advise you.

We will now begin trial 21.

Group 2 (where evaluation information was continued and social comparison information was withdrawn).

In order to save time we will not write down your individual choices and have you check them as before. Since we have had no problems and we all seem familiar with the general procedure I think we are alright to go ahead without doing this. Mrs. _____ and I will note your choices and will each calculate the score for one of you and write it directly on your score form. We will return the form to you to note your score. You will then file it in the answer box as usual. Hopefully this will save some time. We will fill in your partner's score later from the recorded score on his/her form. If you want to know your partner's score and have time to wait after the experiment we could advise you then.

We will now begin trial 21.

Group 3 (where evaluation information was withdrawn and social comparison information was continued).

In order to save time we will not stop to calculate your scores after each trial. We will record your choices on the choice form and have you check them as before—remember it is important for you to note if your partner's choice is in agreement or disagreement with your own as this also serves as a check. After you have confirmed that we have recorded your choice correctly I will give the choice form to Mrs. _____ to calculate the scores while we go on with the next trial. You will be informed of your score at the end of the study.

We will now begin trial 21.

Group 4 (where evaluation and social comparison information were both withdrawn).

In order to save time Mrs. _____ will note the choice of one of you and I will note the choice of the other. We will check with you to make sure we have recorded it correctly and then Mrs. _____ will calculate your scores while we continue with the next trial. You will be advised of your score at the end of the study.

We will now begin trial 21.

APPENDIX H

POST EXPERIMENTAL QUESTIONNAIRE

Directions:

Please answer the following questions as accurately and honestly as you can.

(Where appropriate place an "X" in the blank space above the word that best describes your feelings. The center blank should be used only when the words at both ends describe how you feel equally well. Underline where applicable.)

1. We would appreciate any comments you have regarding the study. Please state your comments briefly in the space below. This might include how you enjoyed the study, how you felt during the study and any general comments you may have.

2. How often would you say you and your partner disagreed on your choices? (Circle)

"E" Very often Quite Often Seldom Never

3. When you and your partner disagreed how often did you feel you were right and your partner was wrong? (Circle)

"F" Very Often Quite Often Seldom Never

4. In terms of distance estimation ability how would you rate yourself and your partner?

SELF:

Very	Quite HIGH	Slightly	Equal	Slightly	Quite LOW	Very

"G"

PARTNER:

Very	Quite HIGH	Slightly	Equal	Slightly	Quite LOW	Very

5. How much do you feel your performance on this task and that of your partner was determined by

SELF:

"H" Ability_____ Luck or Chance_____ Task Difficulty_____

PARTNER:

"I" Ability_____ Luck or Chance_____ Task Difficulty_____

(Indicate in percentages–make sure they add up to 100% each.)

"J" 6. Do you feel the test was fair? Yes_____ No_____
(If NO, explain)

7. How did you go about arriving at the level of the predicted scores for yourself and your partner?

"K" Guessed_____ Based on Previous Scores_____ Other Means_____
(Explain)

8. While you were in the study did you ever have doubts about the information the researcher was giving you?

"L" Yes_____ No_____
(Explain)

9. Explain briefly in your own words what you think the purpose of this study is.